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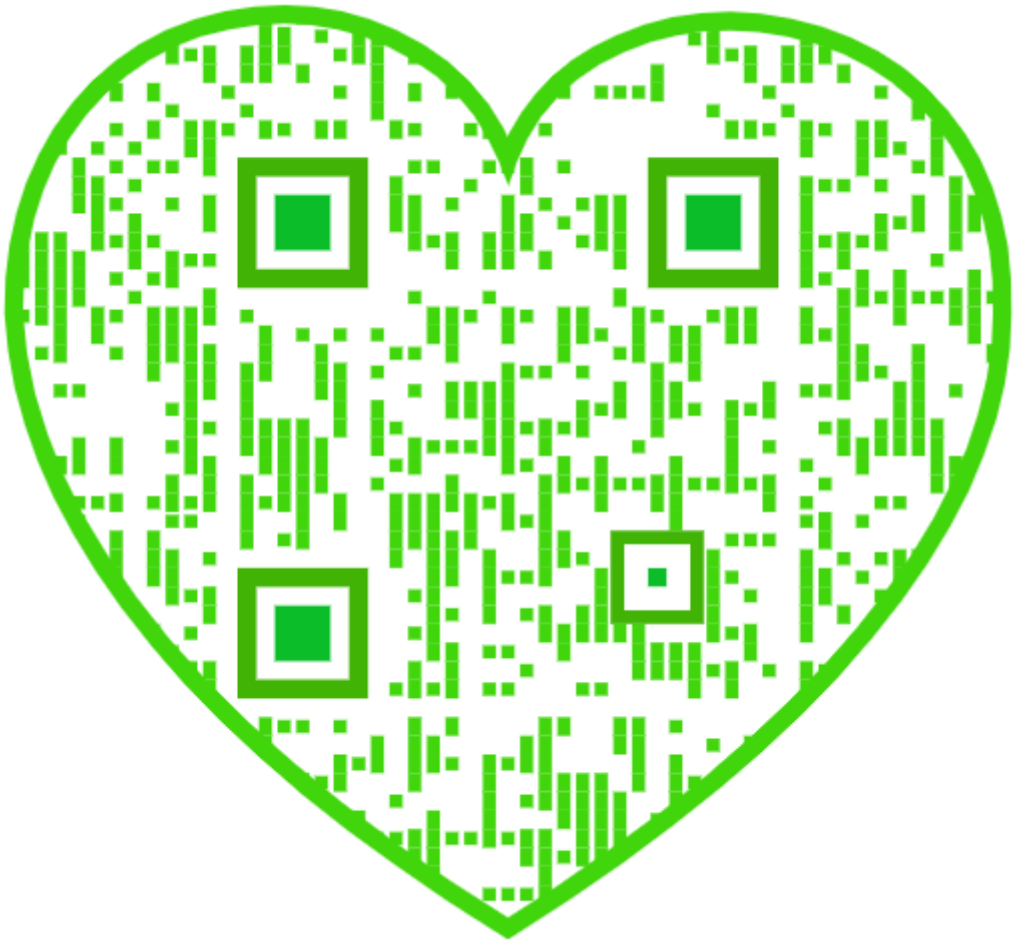

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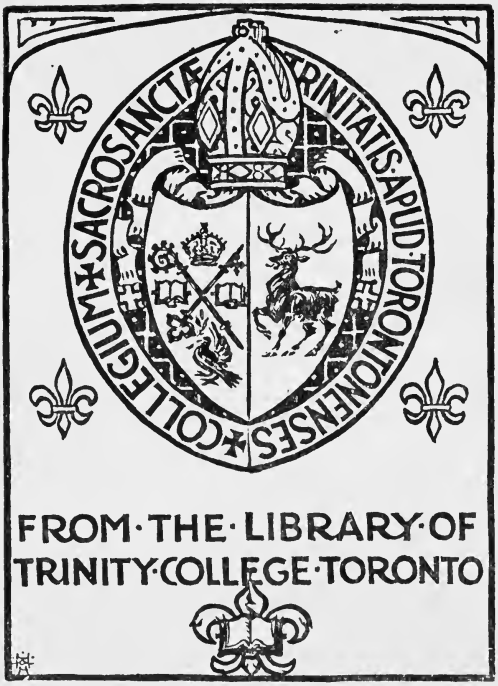
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A

Scripture Herbal.

What though I trace each herb and flower
That drinks the morning dew,
Did I not own Jehovah's power
How vain were all I knew!

BY

MARIA CALLCOTT.

LONDON:
LONGMAN, BROWN, GREEN, AND LONGMANS,
PATERNOSTER-ROW.
1842.

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LONDON:
Printed by A. SPOTTISWOODE,
New-Street-Square.

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PREFACE.

My chief object and aim in writing this little book has been to induce those who read and love God's written word, to read and love the great unwritten book which he has every where spread abroad for our learning. In doing this we shall follow the steps of our Lord Jesus. How constantly his lessons and parables are quickened and adorned by references not only to the use, but to the beauty, of the vegetable creation; saying of the Lily, "Solomon in all his glory was not arrayed like one of these!" Observe, too, how the precursors of our own heavenly Teacher, the prophets, and the psalmist, and the writer of the Canticles, are perpetually setting forth the majesty and beauty of the heavens and earth, until we join them and cry, "Lord! how manifold are thy works! in wisdom hast thou made them all."

A second reason for printing an English *Scripture Herbal* is, that, of the best and most trusty books on the natural history of the Bible, the greater number are written in the learned languages; and, of the many millions who read the Scriptures in my native tongue, how few there are who can decipher the inscription "written in the Hebrew, and in the Greek, and in the Latin!"*

I feel, however, that I ought to give some account of the help I have had in composing my *Herbal*, a task which has occupied and comforted me during the last three years of a long and hopeless illness.

The title I honestly acknowledge I have borrowed from an almost forgotten little book†, which used to

* The principal books of this kind are:—

Calmet's *Dictionary*.
Ursini *Arboretum Biblicum*, 1699.
Hiller's *Hierophyticon*, 1725.
Scheutzer's *Physica Sacra*, 1731.
Celsius's *Hierobotanicon*, 1745.
Forskal *de Rebus naturalibus*, &c., 1776.
Bochart's *Hierozoicon*, 1793.

Besides these, there are many books of early travels to Egypt and the East that throw great light on the natural history of the Bible.

† *Theobotanologia, sive Historia Vegetabilium Sacra;* or a Scripture Herbal, by William Westmacott of Newcastle-under-Line, a physician, 1694. Many of his wonderful recipes are taken from Dr. Bates or Butts (perhaps Henry VIII.'s physician).

excite my admiration when a child, by the wonderful powers it ascribed to simples, especially if due regard were paid to gathering them at the rising and setting of their planets. It is a curious little work, and contains much that is rare, at least in our times.

I have made use of another but very superior English tract, namely, that of Sir Thomas Brown; which professes to treat of all the plants named in Scripture, from the Fig-tree in Genesis to the Worm-wood of the Revelations.

Gerard's *Herbal*, and Dr. Philemon Holland's translation of Pliny, have been invaluable to me. Published but little before the authorised version of the Bible, the names of plants in them can hardly be other than those used by our venerable translators. The wood-cuts and histories in Gerard, and Pliny's descriptions under the English names supplied by Holland, have often guided me to the true plant of which I was in search.

Of the works written professedly on any branch of the natural history, I have made most use of the *Hierobotanicon* of Celsius. That learned man, who was in part the tutor of Linnæus, and his predecessor in the chair of natural science at Upsal, employed fifty years in composing his most laborious work; and, when

about to print it, travelled himself to Holland and Germany to procure the Oriental types necessary for the purpose. On his return, two hundred and fifty copies only were printed, and the work is now very difficult to procure. I owe the use of it to my excellent friend Robert Brown, Esquire, without whose kindness in advising me and procuring for me books which I could not otherwise have commanded, my own little work, if executed at all, must have been defective indeed.*

The enthusiastic Hasselquist, short as was his career, did much for Scripture botany. Struck with an expression in one of Linnæus's lectures, regretting that so little was known of the natural history of Palestine, the young man devoted himself to travels in that country; and, overcoming difficulties of which poverty and bad health were not the least, he reached Syria, saw some part of Egypt, but never recovered

* It may seem vain-glorious thus publicly to boast of the friendship of this great botanist, who, by the universal voice of the naturalists on the continent of Europe, has received the title of PRINCEPS BOTANICORUM, a title hitherto bestowed only on Linnæus. But I shall soon be beyond the power of expressing gratitude in this world, and I am willing with what breath I have to thank him, and to express a regard that has lasted long, and can only end with life. His friend Mr. Bennet has also done much for me, and must receive my thanks here for all his trouble.

from the heat and fatigue of his journeys in Palestine, and died a martyr to science.*

Forskal, another of the same class, if he did not travel expressly to seek Bible plants or to explore the vegetation of the Holy Land, did very much to increase our knowledge of the botany of the East, and, like poor Hasselquist, became a victim to the effects of fatigue and a hot climate.

On the revival of letters after the long night of the dark ages, the ancient botanists and physicians had their share of the attention of scholars. Hermolaus Barbarus, in his lectures at Rome, included botany, as known to the Greeks, among the natural sciences on which he discoursed. Mathiolus wrote more than one treatise on the botany of Dioscorides, and others followed in the same train.

But the travels of Clusius into Spain and Africa, and the visit of Prosper Alpinus into Egypt, gave an impulse to the study of living plants which could not but bear worthy fruit.

Of their followers among the older travellers, I have profited most by the journeyings of Rauwolf,

* His papers were placed in the hands of Linnæus, who best knew their value. Few biographical sketches are so interesting as that prefixed by the master to the travels of his unhappy pupil.

in whose book we find the work of a cheerful active mind, allowing nothing to escape observation. His descriptions are consequently satisfactory, and the few figures he has given of rare plants are trustworthy as far as they go.

Kæmpfer's agreeable *Amœnitates Exoticæ* has furnished me with much instruction relative to the Oriental drugs and plants, especially the palm.

Among more recent travellers I have read with great advantage Tournefort's travels in the Levant, Bruce's in Abyssinia, Dr. Russell's history of Aleppo, and Sonnini's account of the visit of the French sçavans to Egypt: and, of contemporary travellers, I have found Dr. Royle most to be depended upon, either for confirming old notions concerning the drugs of the East, or adding the weight of his testimony to those of more recent botanists, illustrated as his work is by beautiful coloured figures.

From Mr. Loddiges's curious collection of exotic plants, he kindly sent me specimens from which I have drawn three of my most interesting subjects.

But were I to name every friend to whom I owe plants or prints to copy, and every book I have consulted, this notice would become unreasonably long.

I must, however, mention two little modern books,

now published in English. The first and best we owe to an American author. Dr. Harris's *Dictionary of the Natural History of the Bible* is most carefully and conscientiously compiled, and is an admirable book for the table of every reader of Scripture, though it is not, as the ingenious writer imagines, so perfect as to supersede the necessity of any other.

The second small book I would name is Rosenmüller's *Mineralogy and Botany of the Bible.* This I did not see till my own work was just ready for the press. At first the great array of learned names at the foot of each page alarmed me, even more than the words in Oriental characters. But I was soon satisfied that Rosenmüller, though a diligent and laborious compiler on Scripture matters, had depended for his botany entirely on the authors whom I had already consulted, adopting their quotations as his own. Of course I was pleased, after looking through the work of so meritorious a Bible scholar, that I had nothing to alter, and nothing to add to what I had previously gleaned from his predecessors.

I must now say something of the cuts which head the descriptions of the plants. The collecting the figures and drawing them on the wood-blocks, as it was a work of labour, so it was a labour of love. The

authorities whence they are taken will be found in the index to the cuts; and the great solace I have derived from the drawing of them, confined as I am to a sick bed, makes up for whatever pain there might be in acknowledging that the faults are entirely my own, since my lines were most carefully and accurately followed by that excellent wood-engraver Mr. W. Folkard, to whose exactness and diligence I am greatly indebted.

That the drawings and the descriptions, together with the illustrative matter contained in my humble book, may effect the object I have already laid open, namely, that of inducing even a few to unite the study of the unwritten book of God with that of his written law, is the ardent wish and fervent prayer of

THE AUTHOR.

Note.—I have never been able to discover the author of the beautiful lines set to music by Handel, which I have chosen for my motto. They are not Dr. Watts's. But tradition assigns the poem of the Solomon, as well as some other oratorios of Handel, to his friend Dr. Morell.

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WITH THE AUTHORITIES FOR THE FIGURES; WHETHER FROM OLD OR RECENT AUTHORS, OR FROM NATURE.

ALGUM, OR ALMUG . *Thuja articulata:* copied from the Flora Atlantica of Desfontaines.

ALMOND . . . *Amygdalus communis:* from Nature.

ALOES . . . *Aloe socotrina:* from an old wood-cut under which is the name *Great Sea Houseleek;* and the description calls it the plant from which the purgative medicinal aloes is produced. The figure is repeated with little difference in several Herbals of the 16th and 17th centuries.

ANISE . . . *Pimpinella Anisum:* from Nature.

APPLES . . . *Pyrus Malus:* from Nature.

ASH . . . . *Fraxinus excelsior:* from Nature.

ASPALATHUS . . *Aspalathus Creticus, Anthyllis Hermanniæ:* from Nature. The plant sent me by Mr. Loddiges.

BALM, OR BALSAM . *Balsamodendron Gileadense:* copied from Bruce's Travels.

BARLEY . . . *Hordeum vulgare:* from Nature.

BAY . . . *Laurus nobilis:* from Nature.

ROSE BAY . . *Nerium Oleander:* copied from the Botanical Magazine.

BEANS . . . *Vicia Faba:* from Nature.

BOX TREE . . *Buxus sempervirens:* from Nature.

BRAMBLE . . . *Rubus fruticosus:* copied from English Botany.

BRIAR . . . *Rosa canina:* from Nature.

BULRUSH . . . *Typha latifolia:* from Nature.

Calamus, or Sweet Cane	*Andropogon Calamus aromaticus:* copied from Dr. Royle's Illustrations of the Botany of the Himalaya Mountains, p. 425.
Camphor	*Laurus Camphora:* copied from the Botanical Magazine.
rightly Copher, Cupher, or Cuprus	*Lawsonia inermis;* the Henna or Alkenna of the East: copied from part of Sonnini's plate, after comparing it with Rauwolf's figure.
Caper	*Capparis spinosa:* copied from the Botanical Magazine.
Cassia or Cassia Fistula	*Laurus Cassia:* copied from the Botanical Magazine.
	Cassia Fistula: from Magazine of Medical Botany.
Cedar	*Pinus Cedrus:* drawn from a branch of the cedars of Lebanon in the gardens of Holland House.
Chesnut	*Fagus Castanea:* from Nature.
Cinnamon	*Laurus Cinnamomum:* copied from the Botanical Magazine.
Citron	*Citrus Medica:* drawn from a branch grown at Mr. Wells's, at Redleaf, Kent.
Cockle	*Agrostemma Coronaria:* from Nature.
Coriander	*Coriandrum sativum:* from Knorr's Flowers.
Cotton	*Gossypium herbaceum:* from a dried specimen of Maltese cotton, compared with Dr. Royle's figure. My leaves are a little more obtuse than those of the print in Royle.
Cucumber	*Cucumis sativus:* from Nature.
Cummin	*Cuminum Cyminum:* from a plant raised in the garden of Launce Chambers, Esq., compared with the figure in Cavanilles.
Cypress	*Cupressus sempervirens:* part of the plate in Pallas's Flora Rossica.
Dove's Dung (1, Flower; 2, Root)	*Ornithogalum umbellatum;* also, in English, Bird's Milk and Star of Bethlehem: from Nature.
Ebony	*Diospyros Ebenus:* from a modern wood-cut.
Elm	*Ulmus campestris:* from Nature.

Fig	*Ficus Carica*: from Nature.
Fir	*Pinus Abies:* from Nature.
Fitches	*Vicia Sativa:* from English Botany.
Flags, or Sea Wrack	*Zostera Marina:* from English Botany, *Sowerby.*
Flax	*Linum Usitatissimum:* from Sowerby in English Botany, compared with nature, the seed-vessel added.
Frankincense	*Boswellia Thurifera:* from a modern wood-cut.
Galbanum	*Bubon Galbanum:* Botanical Magazine.
Garlic	*Allium Ascalonicum:* from the Botanical Magazine.
Gourd	*Cucumis Prophetarum:* from a modern wood-cut.
Gourd of Jonah, or Kiki	*Ricinus communis;* Palma Christi, or Castor-Oil Nut: from the Botanical Magazine.
Grass	*Festuca fluitans* and *Glyceria fluitans:* from an engraved collection of grasses.
Hasel	*Corylus Avellana:* from Nature.
Heath	*Erica vulgaris:* from Nature.
Hemlock	*Conium maculatum:* from Nature.
Holm	*Quercus Cerris:* from Nature.
Hyssop	*Hyssopus officinalis:* from Nature.
Ivy Leaf / Ivy Berries	*Hedera Helix:* both from Nature.
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Illustration, Broom-Rape	*Orobanche major:* from English Botany.
Ladanum	*Cistus ladanifera:* from the Botanical Magazine.
Leek	*Allium Porrum:* from Nature.
Lentils	*Cicer Lens:* from Nature.
Lign Aloes, or Lignum Aloes	*Aquilaria Agallochum:* from an inedited drawing sent from India by Dr. Roxburgh to Robert Brown, Esq., who kindly lent it me to copy.

LILIES . . . *Lilium candidum:* from Nature.

LILY OF SOLOMON . *Narcissus Calathinus:* from Nature.

LOCUST . . . *Ceratonia Siliqua:* from Knorr's Flowers.

MALLOWS . . *Corchorus olitorius:* from Lamarck's Encyclop. Method.

MANDRAKE . . *Atropa Mandragora:* from the cuts in Gerard's Herbal, and in Camerarius's edition of Matthiolus.

MANNA . . . *Alhagi Maurorum*, or *Hedysarum Alhagi:* from Rauwolf's Travels.

MASTICK . . . *Pistacia Lentiscus:* from the Botanical Magazine.

MELON . . . *Cucumis Melo:* from Nature.

MILLET . . . *Panicum Miliaceum:* from Loudon's Encyclopædia.

MINT . . . *Mentha viridis:* from Nature.

MULBERRIES . . *Morus nigra:* from Nature.

MUSTARD . . *Sinapis nigra:* from the Magazine of Medical Botany.

MYRRH . . . *Balsamodendron Myrrha:* from the lithograph of Nees von Esenbeck.

MYRTLE . . . *Myrtus communis:* from Nature.

NETTLE . . . *Urtica Dioica*: from Nature.

NIGELLA . . . *Nigella Orientalis:* from the Botanical Magazine.

NUTS (WALNUTS) . *Juglans regia:* from Nature.

OAK . . . *Quercus Robur* (*Pedunculata*): from Nature.

OLEASTER, OR WILD OLIVE. *Elæagnus spinosa:* from Pallas's Flora Rossica.

OLIVE . . . *Olea Europæa:* from a wood-cut.

ONION . . . *Allium Cepa:* from Nature.

ONYCHA . . . *Styrax Benzoin:* from the lithograph of Nees von Esenbeck.

PALM (4 cuts) . . *Phœnix Dactylifera.* The cultivated Palm, and the cuts of the flower and bunch of fruit, are

Fig .
Fr

copied from Kæmpfer's Amœnitates Exoticæ. The cut of the wild Date tree represents such as I have seen when neglected, or at most only tapped in the trunk to procure the sweet juice whence the jagree is made. The leaves left to perish on the stem, looking like the beard of some octogenary hermit, no care taken to secure the forming and ripening of the fruit, and the desert Palm appears the wildest of trees. Kæmpfer gives us a curious plate of the gathering of the date. In the foreground the expressing the juice of the fresh fruit for making date wine is represented. The cylindrical wicker or cane baskets are filled to the top with fruit, upon which heavy stones are piled till the juice runs out by a spigot below, whence it flows into the jars where the vinous fermentation takes place. The next group is formed of those who gather the choicer fruit, throwing it into mats held up by persons below, and pack it in flag baskets for the merchants, who are seen advancing in the distance with their beasts of burden, ready for the conveyance of the new fruit to the nearest market, whether that be a caravan station, or a city, or sea-port. Between the trees, and mixed with the cultivators, the masters appear to enjoy the harvest. In one place an aged man is seated on his prayer carpet, and reading his Koran. Beyond him is a group of younger men smoking and drinking coffee, listening apparently to a teller of tales; and further on another set, amusing themselves with the sight of public dancers and musicians. This plate is well adapted to show the importance of the date harvest to Egypt and Arabia, being to a great proportion of the natives both corn and wine.

PANNAG . . .	*Panax Quinquefolium:* from the Botanical Magazine.
PAPER REED, AND ILLUSTRATION	*Cyperus Papyrus:* from Bruce's Travels. The illustration is from a drawing of my kind friend Mr. Clift of the College of Surgeons.
PINE . . .	*Pinus sylvestris:* from Nature.
PLANE . . .	*Platanus Orientalis:* from Nature.
POMEGRANATE . .	*Punica Granatum.* The leaves and flowers from branches sent from Windsor Castle, and the fruit from Portugal, put together from Nature.
POPLAR . . .	*Populus alba:* from Nature.
QUINCE . . .	*Cydonia Vulgaris:* from Nature, the fruit just set.
REED . . .	*Arundo Donax.* My friend Mr. E. Cooke drew the reed from the living plant in the Botanic Garden at Leyden; the flower I have from another source.
ROSE . . .	*Rosa centifolia rubra:* from Nature.
RUE . . .	*Ruta graveolens:* from Nature.
RUSH . . .	*Juncus effusus:* from Nature.
RYE . . .	*Secale cereale:* from Nature.
SAFFRON . . .	*Crocus sativus.* Botanical Magazine.
SCARLET . . .	*Quercus coccifera:* from Russell's Aleppo.
SHITTIM WOOD .	*Acacia vera.* The branch and leaves kindly sent me by Mr. Loddiges, the flowers and fruit from authentic sources.
SOAP . . .	*Salsola Kali:* from English Botany, compared with Rauwolf's cut of the Kali of Arabia.
SPIKENARD (with another cut of the part formerly sold in the shops)	*Nardostachys Jatamansi.* This cut is part of the beautiful plate in Dr. Royle's Illustrations of the Botany, &c., of the Himalaya Mountains. The drawing from Gerard agrees with that in Camerarius's edition of Matthiolus's Epitome.
STACTE . . .	*Balsamodendron Kataf:* from Nees von Esenbeck.

Styrax, or Storax	*Styrax officinalis:* from Nature. The sprig was gathered from the plant set by Miller himself in the Physic Garden at Chelsea.
Sycamore . .	*Ficus Sycomorus:* from Rauwolf's Travels.
Tares . . . or perhaps Darnel	*Ervum tetraspermum:* from English Botany. *Lolium temulentum:* from Loudon's Encyclopædia of Botany.
Thistle . . .	*Carduus Arabicus:* from the Botanical Magazine.
Thorns I.	*Paliurus aculeatus:* from Pallas's Flora Rossica.
Thorns II.	Seed-vessel of the same.
Thorns III.	*Lycium horridum:* from the Flora Rossica.
Thorns IV.	*Ononis spinosa*, or Rest-Harrow: from Nature.
Thorns V.	*Ruscus aculeatus*, or Butcher's Broom: from Nature.
Thorns VI.	*Prunus sylvestris*, or Sloe: from Nature.
Tiel Tree . .	*Tilia Europæa:* from Nature.
Turpentine or Terebinth Tree	*Pistacia Terebinthus:* from a living branch sent me by Mr. Loddiges. The flower and fruit from Rauwolf's Travels.
Vine, Grape, &c. .	*Vitis Vinifera.* The young grape just set: from Nature.
Wheat . . .	*Triticum Æstivum*, &c. The English ear from Nature, the Egyptian or Minnith wheat from a cut.
Willow (2 cuts) .	*Salix:* both cuts from Nature.
Wormwood . .	*Artemisia Judaica:* from Knorr's Flowers.

A

SCRIPTURE HERBAL.

ALGUM, OR ALMUG.

Thuya articulata,—Algum, Almug, or Thyine Tree.

Linnæan class and order, MONŒCIA MONADELPHIA.
Natural order, CONIFERÆ.

ALGUM, OR ALMUG.

1 Kings, v. 6. 2 Chron. ii. 8.; ix. 10, 11.
Revelation, xviii. 12.

A CONIFEROUS tree, growing in the North of Africa, may lay claim to being the Almug of the Old Testament, the Thyine tree of the Revelation.

The cut I have given is from Desfontaine's *Atlantica*. He says it grows in arid land, and attains to the height of sixteen feet. Vahl talks of it as a shrub of six feet high; but Schaw, in his account of African trees, says that it is something between a tree and a shrub.

The tree is called ARAR by Schousboe, who resided some years in Mauritania, and is shown by him to be the Thuya articulata. His description tallies exactly with that given of it by Vahl, Schaw, and other travellers. He says that the usual size was from twenty to twenty-four feet in height, and a foot or a foot and a half in diameter.* This agrees exactly with Des-

* See Schousboe's paper on the true origin of the resin known by the name of Sandarach, in the *Bulletin de la Société Philomathique*, No. 31.

fontaines, who saw the trees among the mountains near Algiers, but he says Broussonet assured him that he had seen larger in Morocco. The difference in size may probably be owing to the difference of soil in the places where they grow. An English officer, belonging to the Duke of Wellington's army in Spain, having occasion to be on the western side of the lower range of Mount Atlas in search of a particular breed of horses, observed that the pines* of the forests on the mountain were not only diminutive in size, but singularly contorted; perhaps either the aridity of the soil, or the prevalence of certain winds, or both together, might have produced these dwarfish forests.†

The Algum was one of the costly materials furnished by Hiram, King of Tyre, to Solomon, for the building of the Temple of Jerusalem; and also for

* Pinus halepensis.

† I have seen a specimen of the wood of the Thuya articulata cut longitudinally; it is dark nut-brown, close-grained, and very fragrant. Another specimen sent home to the Admiralty, with a branch of the tree attached to it, proves it to be the Thuya articulata. Another section of a wood, thought till lately to be a larger Thuya, was shown me. This has also been sent to the Admiralty as a specimen of African timber, together with a small branch showing it to be a species of Larch. The native name is El Aris, or El Areez.

his own magnificent palaces, particularly the house of Mount Lebanon.

The cargo of Algum trees brought to Solomon while the Queen of Sheba was at Jerusalem, is said to have exceeded all that had been seen before in that city, or that was ever imported afterwards.

Pillars to ornament the magnificent terraces of the temple and the palace were formed of it ; but a part was reserved for the making of harps and psalteries for the king's singers. Thus the whole was dedicated to pious or to regal uses. Nor had it sunk in estimation when St. John wrote the Apocalypse, for he names it as one of the precious things that shall no longer attract the merchants of the earth to fallen Babylon.

In the sixteenth chapter of the thirteenth book of Pliny's *Natural History*, he says that the Thyine trees grew in the neighbourhood of the temple of Jupiter Ammon, and also in the Cyrenaic province ; and that Theophrastus * recommends the timber for temples, and such buildings as should be almost everlasting.

In the preceding chapter he gives an account of the precious citron or citrine tables, which the most

* Theophrastus wrote A.U.C. 440.

elegant, as well as the most luxurious, of the Romans loved to have for their banqueting-halls. The planks were sawn out of the Thyine tree, and measured about four feet in diameter; they were valued according to the veins, knots, and colours, which variegated them; and were called from those accidents, tiger citron, leopard, peacock's feather, or fly citron tables. Cicero appears to have introduced this luxury to Rome: but the most costly we read of is one that Tiberius caused to be plated all over with one of the precious metals.

The trees producing these citron tables grew chiefly in the forests skirting Mount Atlas, which were exhausted even in Pliny's time: but the mountain Anchorarius, in Upper Mauritania, yielded the best and fairest trees; and these trees were very like to the female cypress in leaf, in smell, and in bulk.

These descriptions, I think, leave little doubt that the Thyine is the Algum of Scripture, the modern Thuya articulata; and, as it was easily procurable by the ships of Tyre from the port of Cyrene and those of Mauritania, Hiram would naturally send so precious a material for the building of the Temple. That it came to Jerusalem from Joppa, with the firs and

cedars, appears certain; because Solomon applies to Hiram for it in these words: "Send me also cedar trees, fir trees, and Algum trees, out of Lebanon." 2 Chron. ii. 8.

The little difference in time between St. John and Pliny does nothing to weaken the opinion that the Thyine tree, an object of commerce to Babylon, is the same with the Algum and the citrine.

This tree yields the gum sandarach, so much used in the preparation of parchment; and therefore an absolute necessary to the Jews, who were commanded to make such frequent copies of their Scriptures, and who required, besides, an immense quantity of parchment for their phylacteries, that is, texts written on slips, to be bound upon their hands, and worn as frontlets between their eyes, and placed upon the doorposts of their houses, and upon their gates.*

Some writers, and among them Sprengel, suggest that the Algum tree might be sandal wood: but the

* Deuteronomy, vi. 8, 9. The modern Jews write a sentence of the Law on parchment, and enclose it in a glass or brazen tube, and fix it to their doors. It is said that sandarach is also gathered from the juniper and the tamarisk, which some of the Arabs call indifferently Arar.

sandal wood of Sprengel is the Pterocarpus santalinus or red sanders, not the true sandal wood. It is an Oriental coniferous tree; and those who take either it or the true sandal for Algum have an authority in the tenth chapter of the first book of Kings, and ninth chapter of the second book of Chronicles, not at all agreeing with Solomon's request as to the trees to be furnished by Hiram; for it is related that "the navy of Hiram, that brought gold from Ophir, brought in from Ophir great plenty of Almug trees and precious stones."

However this may be, it is certain that the true sandal wood is unfit for the purposes to which the Algum was applied, especially for the making of musical instruments, while the Thuja is particularly adapted to them, and was moreover easily purchased by Hiram from the Phœnician colonists along the African shore of the Mediterranean; but the bringing of sandal wood, or even red sanders, from so distant a country as Eastern India, the nearest place where it is found, particularly in such large quantities, would have been extremely difficult, even to the fleets which brought the spices and precious metals from Ophir to the ports of the Red Sea.

ALMOND.

Amygdalus communis,— Common Almond.

Linnæan class and order, Icosandria Monogynia.
Natural order, Amygdaleæ.

Gen. xliii. 11.
Exod. xxv. 33, 34.; xxxvii. 19, 20.
Num. xvii. 8.
Eccl. xii. 5.
Jerem. i. 11.

This pretty little tree, whose pink and white blossoms appearing before the leaves, make our gardens gay in the early spring, bears two varieties of fruit, the sweet, and the bitter almond. The sweet almond is known

best as a mere luxury in this country, though the apothecary makes great use of it in emulsions for coughs and colds. By long pounding in a mortar, the oil and the substance of the almond become so thoroughly mixed, that a kind of milk is formed, which I have seen put into tea, like cow's milk, during a sea voyage.

The bitter almond yields a great quantity of that powerful medicine, yet terrible poison, prussic acid; notwithstanding which, the smell and taste are so agreeable, that confectioners, particularly in Italy, use it to flavour many of their sweetmeats and cakes.*

The Jews both of ancient and modern times naturally reverenced the Almond, as it was the subject of one of the miracles wrought at the time when they were brought up out of their Egyptian bondage, and received the law which distinguished them among all nations as the people of God.

When the heads of the families of Israel presented their rods or staffs before God, the rod of Aaron, though long cut from the tree, budded, blossomed, and even

* The duty on almonds, called Jordan almonds, imported from Syria to England in 1841, amounted to 3373*l.*, and of other almonds, to 4144*l.*

bore fruit, a miracle which confirmed the priesthood for ever in the family of Aaron and his sons.

Hence it is that on the days of great festivals, when the ancient Jews would have presented palm branches in the Temple, the modern English Jews, who cannot obtain a palm branch, carry a bough of the flowering Almond to the synagogue.

Perhaps they may be influenced in their choice by the circumstance, that, in the great famine that prevailed in the East in the days of Joseph, the Almond was among the fruits of the land of Canaan that did not fail. For Israel, when pressed by his sons to allow them to go a second time to Egypt to buy corn, desires them to carry a present of the best fruits of the land, "A little balm, and a little honey, and myrrh, and nuts, and Almonds."

So, as the Almond failed not to their patriarchs in the days of dearth, it cometh to their hand in this day of worse and more bitter privation, as a token that God forgetteth not his people in their distress, nor the children of Israel, though scattered in a foreign land, though their home is the prey of the spoiler, and their temple is become an high place for the heathen.

ALOES.

Aloe socotrina,— Socotrine Aloes.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, LILIACEÆ.

Psalm xlv. 8.	Song of Solomon, iv. 14.
Prov. vii. 17.	St. John, xix. 39.*

THIS plant itself is not mentioned in Scripture ; and all the texts in which Aloes are named, relate to the

* For some observations on these texts look forward to LIGN ALOES.

gummy substance procured from the Aloe, either by making incisions and carefully collecting the juice that exudes, or by bruising the fleshy leaves. In either case, the liquor is set by in an airy place in the shade, and carefully skimmed for many days successively ; when it is sufficiently thick, it is laid out in the sun to dry, and then packed in skins or boxes.

The taste is intensely bitter, but the smell very agreeable. It was one of the drugs used by the ancients, particularly the Egyptians, for embalming the dead.

The strong sweet odour, and the bitterness combined, kept off destructive reptiles and insects ; and myrrh, having the same qualities, was employed, together with Aloes, for the same purpose.

When Christ was taken down hastily from the cross, that his body might not remain exposed on the Sabbath day, Nicodemus brought about a hundred pounds' weight of myrrh and Aloes, which were wrapped with the body in the linen cloth wherein he was laid.

When Aloes are mentioned simply as perfumes, it is probable that lign aloes is meant.

The modern medicinal Aloes are collected from

various species of Aloe; some growing in Asia, where, however, they are not native; some in the West Indies, where they have been introduced for the purposes of commerce; but the Socotrine Aloe is the best. It is a beautiful plant, growing to the height of five or six feet, with vivid green leaves, and a flower of scarlet, white, and green. It owes its name to the Island of Socotra, lying at the mouth of the Red Sea; and probably the method of collecting and managing the juice, which gives the Socotrine Aloes the superiority over others, is a relic of the practice of the ancient Egyptian priests and embalmers, who made so much use of it, and possibly might have their agents on the island, near as it is to Egypt, for the purpose of buying it up.

Some species of Aloe, more correctly Agave, which are in common speech called Aloes, though improperly, grow in desert sandy places, where no water is. They are, nevertheless, the sign of refreshment to the traveller; for their long thick leaves are each gathered round the stem, forming a cup, which collects the rain and dew in such large quantities, that the thirsty may drink, and the weary rest and drink again, of this desert fountain.

The Aloe seems to love to adorn ruins. Who has been in Rome, and has not seen how the palace of the Cæsars is crumbling piecemeal into nothing ? yet the Aloe (really Agave) that crowns the ruin is fresh and brilliant as on the day of creation, shrouding, with its ever-springing youth, the perishable work of man.

It is said the finest of such Aloes cover the ruined walls of Famagosta, and hide the bones, it may be, too, the blood-stains, where Turk and Christian struggled for the dominion of the civilised world. That conflict has long ceased, and the banners of the crescent and the cross are flying together in many a region in friendship.

The real Aloe is one of the plants to some species of which a superstitious value has been attached. The Mahommedans of Egypt and Palestine reverence the Mitre Aloe, which grows in plenty in the neighbourhood of Mecca ; and every man who has performed his pilgrimage would fain hang a Mitre Aloe over his door as a proof that he had done so, even without the prevalent notion that such Aloes bring good luck ; and travellers, a century ago, often found them suspended across a street, to render it fortunate.

The Agave, commonly called American Aloe, is a

very beautiful plant, very different in character from the genuine Aloe ; from one species of Agave the Mexicans prepare an intoxicating liquor. The long leaves, like those of the true Aloe, have a firm straight fibre, which, on steeping and beating, becomes fit for rope-making or the loom. But the chief praise of the true Aloe now, as in the days of King David, is, that it is a precious medicine.

ANISE.

Pimpinella Anisum, or Anisum officinale, called also Anicetum or Anise, and by Dioscorides Anison.

Linnæan class and order, PENTANDRIA DIGYNIA.
Natural order, UMBELLIFERÆ.

ANISE.

St. Matthew, xxiii. 23.

ANISE is named but once in Scripture, and that in the New Testament, where St. Matthew, relating our Saviour's reproof of the outward righteousness and inward corruption of the Pharisees, tells us, that his words were, "Woe unto you, Scribes and Pharisees, hypocrites! for ye pay tithe of mint, and Anise, and cummin, and have omitted the weightier matters of the law, judgment, mercy, and faith."

Among the ancients Anise seems to have been a common pot-herb in every garden; for Pliny says of Anise, "be it green or dry, it serveth as well for seasoning all viands as making all sauces, inasmuch as the kitchen cannot be without it." *

Anise grows wild in Egypt, in Syria, Palestine, and all parts of the Levant; but the Romans considered the Egyptian and Cretan Anise to be the best, especially for medicinal purposes. We look upon the Anise seed of Malta as equally good, and although it is less

* Holland's translation, b. xx. chap. 17.

used in medicine by the moderns than by the ancients, it retains its place in the Pharmacopœia as an excellent stomachic, particularly for delicate women and young children. The Romans chewed it in order to keep up an agreeable moisture in the mouth, and to sweeten the breath ; and some Oriental nations still do the same.

Some of the Persian poets have sung the agreeable qualities of the Anise, and I possess a modern street ballad of Rome in which the slender grace of a young girl is compared to the Anise.

A large species of Anise grows wild in England ; but neither that, nor the Eastern Anise when cultivated here, are much esteemed, and a great quantity is annually imported for the apothecary and distiller's use.

APPLE.

Pyrus Malus,—Apple.

Linnæan class and order, Icosandria Pentagynia.
Natural order, Rosaceæ.

Deut. xxxii. 10. Song of Solomon, ii. 3. 5.
Prov. xxv. 11. Joel, i. 12.
Zech. ii. 8.

Some of the commentators on the Bible are unwilling to believe that so ordinary a fruit as the common

apple could be named with so much commendation as is bestowed on it in Proverbs and in the Song of Solomon. The golden colour mentioned in the first, and the fragrance so praised in the second, have induced them to propose the citron, or the quince, as the Apple of Scripture, on the ground that the native Oriental Apples are hard and worthless, and that therefore they are not likely to be the precious fruit referred to.

But it may be observed, that the uncultivated Apple is nowhere a good fruit ; that the art of gardening was first practised in the East ; and that the ancient Greeks appear to have received the fruit, along with the knowledge of grafting to improve and vary it, from Media. They, again, transmitted their skill to the Romans, who carried the cultivation of the Apple so far as to possess no less than twenty-nine sorts when Pliny wrote.*

What Media to the east, and Greece to the west of Syria and Palestine, possessed in the way of fruit, it is certain that the intermediate provinces might

* For proof of the early culture of the Apple in Greece, we need only refer to the touching passage in the *Odyssey*, where Ulysses, in his interview with his father in the garden, reminds him of the thirteen pears, *ten apples*, and thirty figs, which he had given him when a boy.

have possessed also ; and it is notorious that the cultivation of the Apple and the pear continued in Arabia, so that only a century ago the convent gardens of Mount Sinai furnished the luxurious in Egypt with most delicious apples and pears.*

The word *pomum*, apple, was formerly applied to every kind of fruit, as designating the most precious part of the plant. For instance, when first the peach was brought into Italy, the Romans called it Pomum Persica, the Persian *apple* ; the quince is the Sidonian *apple ;* and in England the annana is called the Pine-*apple*, because it resembles one of the fruits our forefathers knew, that is, the cone of the cultivated pine tree. The annona is called custard *apple ;* a species of Solanum, mad *apple;* and so on.

It is in this sense that Apple is used in Deuteronomy, and by the prophet Zechariah. In Deuteronomy the goodness of the Lord to Israel is thus described : "He led him about, he instructed him, he kept him as the Apple of his eye." Zechariah says to Zion, to express the tender care of God : "He that toucheth you, toucheth the Apple of his eye."

* Hasselquist's Travels.

In the prophet Joel's description of the desolation of the land, he says that the Apple tree is one of the trees of the field which is withered, simply and without a figure, and then it appears in its own true character with great propriety.

The application of the word *pomum*, Apple, to fruit in general has led the Latin Christians almost universally to consider the Apple as the forbidden fruit of the tree of knowledge of good and evil,

> ——— " whose mortal taste
> Brought death into the world, and all our woe."

The Oriental Christians and the Mahommedans are divided as to the claims of the fig and the grape to that " bad eminence ;" and the apocryphal Enoch describes the tree as having the leaves of the tamarind and the fruit of the grape. These fictions, however, would not be worth notice, but for the high importance of the subject on which they are hung.*

The Apple suits best with a temperate climate. I never ate a good one grown between the tropics, nor do the finer sorts thrive in very cold countries. The native Apple of Britain is the crab, formerly more

* I shall consider the claims of the citron and the quince separately in their alphabetical order.

valued than it is now, on account of the quantity of verjuice it yields. The crab verjuice was preferred to that expressed from the unripe grape, for domestic and medicinal purposes ; but both have fallen in value, since the introduction of milder vegetable acids.

Crab Apple trees are chiefly cultivated for the sake of their stocks or stems, which are the best for grafting all the finer kinds of Apples upon ; and a considerable number are yearly consumed in the manufacture of walking-sticks.

The Apple is one of the good gifts which Europe has bestowed upon the new world. In North America, excellent Apples are sufficiently abundant to supply not only plenty of fruit and cider for home consumption, but a large quantity for exportation.

The Jesuits introduced the Apple into Chile, where it has taken possession of the soil in the province of Conception. There the woods are full of the most delicious Apples ; and the great river of the country rolls millions of them down to the very sea beach every autumn, where they are eagerly collected by the crews of such ships as may be at anchor there, and by the fishermen. These Apples are neither trained nor grafted ; but they have lighted on a good soil and

a climate adapted to their growth ; so that in shape, colour, and flavour, they are equal to any in the world.

Would that such gifts, from one land to another, might henceforth become the main object of navigation ! and our guardian flag rather protect the interchange of the natural productions of various climates, and the works of arts and industry of different nations, than be a battle signal, unless the cause of freedom or of independence should again call upon us to win another Trafalgar ! But let us rather pray that peace may endure, and that the period may be long during which the

" Birds of calm sit brooding o'er the charmed wave ! "

ASH.

Fraxinus excelsior,— Common Ash.

Linnæan class and order, Polygamia Diœcia.
Natural order, Oleaceæ.

ASH.

Isaiah, xliv. 14.

The Ash is among the trees enumerated by the sublimest of the prophets, in that marvellous passage, where, with such noble irony, he describes the worshipper of a carved image, who hath not "knowledge nor understanding," to say: "I have burned part of it in the fire; yea, also I have baked bread upon the coals thereof; I have roasted flesh and eaten it; and shall I make the residue thereof an abomination? shall I fall down to the stock of a tree?"

The timber of the Ash, from its toughness and lightness, is fit for carvers' and turners' purposes, and is much used for the tools of husbandmen. The oars of light boats are also made of Ash. It is a tall handsome tree; very graceful when young, with its delicate winged leaves, and drooping bunches of flowers, succeeded by the light-brown keys; and yielding to few trees in picturesque beauty in old age. It loves the neighbourhood of the sea, and does not appear to suffer from the washing of the salt spray.

In the South of Europe, and in the countries of the

Levant, manna exudes from the Fraxinus excelsior, as well as from the Fraxinus Ornus, or Flowering Ash; but, in our colder climate, that valuable medicine is not secreted by the Ash.

ASPALATHUS.

Aspalathus Creticus,— Cretan Aspalathus.

Linnæan class and order, Diadelphia Decandria.
Natural order, Leguminosæ.

Ecclus. xxiv. 15.

Aspalathus is enumerated among the precious spices and perfumes unto which wisdom is likened in the text.

A sweet perfume and ointment were made from the root of it, and there was a notion that the smell became surpassingly delicious, if the rainbow had rested on the shrub. It was also called Sceptrum and Erysi-

sceptrum, by the ancient Romans, who received the perfume from Egypt.

Now the book of Ecclesiasticus seems first to have been published in Alexandria, though written in Judea, after the Captivity. The translation into Greek was made in the reign of Ptolemy Evergetes, by the great grandson of the original writer, as he tells us in his prologue. It is therefore not wonderful that an Egyptian drug, not named elsewhere in Scripture, should have found a place in the text here.

In modern times, the Cretan Aspalathus, or Anthyllis Hermanniæ, or Anthyllis Vulneraria, has had a great reputation as one of the best styptics. The roots are still used in various preparations by the apothecary.

BALM.

Balsamodendron Gileadensis,—Balm of Gilead.

Linnæan class and order, OCTANDRIA MONOGYNIA.
Natural order, BURSERACEÆ.

This has been called by various botanists by various names. Linnæus calls it Amyris Gileadensis; others, Opobalsamum; others, Proteum Gileadense. It is the Balsamon of Theophrastus and Dioscorides.

BALM.

Gen. xxxvii. 25.; xliii. 11. Jerem. viii. 22.; xlvi. 11.; li. 8. Ezekiel, xxvii. 17.

It is curious, that the tree producing the precious balsam, or balm of Gilead, is not a native of the country where we have the first accounts of its being gathered in sufficient quantity to become an article of commerce. It has nowhere been found wild, except on the African coast of the Red Sea, as far as Babelmandel. Of the two gardens in Judea, where Pliny and other ancient authors relate that it grew, that of Gilead was so early planted, that we can form no conjecture as to its origin.

Its produce is named as an article of merchandise, in the book of Genesis, without any observation whatever : but it is probable that the plants which Josephus says the Queen of Sheba presented to Solomon may have stocked the gardens of Jericho, between twenty and thirty miles from those of Gilead, and in a climate and soil still more favourable.

We may conclude, from the care taken of these gardens, from the constant opinion that one of them,

at least, was planted by Solomon, and from the knowledge possessed by the Greeks and Romans that they were the peculiar property of the kings of Judah, how precious the balm was.

Now Jeremiah instructs us in its healing properties, when lamenting the miseries of Israel! "Is there no balm in Gilead, is there no physician there?" And again he mourns the woes of Egypt and Babylon, because they are such as the balm even of Gilead cannot cure.

The road by which the balsam reached Greece and Rome is pointed out by Ezekiel, who says that Israel and Judah supplied the markets of Tyre with it, and the merchants frequenting Tyre carried it, of course, further west.

Tacitus, describing Judea, says that it equals Italy in all natural productions; and has, besides, the Balsam tree and the palm tree to boast of. And Virgil sings, in the *Georgics:*

> "Balm slowly trickles through the bleeding veins
> "Of happy shrubs, in Idumean plains."

Indeed so highly prized was the balsam, that, during the war of Titus against the Jews, two fierce contests took place for the Balsam orchards of Jericho; the

last of which was to prevent the Jews from destroying the trees, that the trade might not fall into the enemy's hands. The gardens were taken formal possession of as public property ; an imperial guard was appointed to watch over them ; and it appears that the emperors increased their size, and endeavoured to propagate the plants.

The imperial care has been unavailing ; not a root nor a branch of the Balsam tree is now to be found in all Palestine.

Twice was the curiosity of the Roman people gratified by the sight of a Balsam tree exhibited in triumph in their streets. The first time was when Pompey returned from his conquests in the East, and Judea first became a Roman province ; and the last time was after a lapse of 144 years, when the spoils of the Temple of Jerusalem were borne in triumph through the imperial city; and, as a sign of the subjection of the whole country, the precious Balm tree was one of the objects exhibited with pride by Vespasian. *

But centuries have passed by since the very names of Balsam of Judea and Balm of Gilead have been

* Pompey's triumph was sixty-five years before Christ; that of Vespasian, A.D. 79.

forgotten. The substance, however, is still eagerly sought for in Egypt and the East, under the name of Balsam of Mecca. It appears to have been one of the great objects of poor Hasselquist's Oriental travels, to procure some unadulterated balsam of Mecca. This, it seems, he was fortunate enough to do at Cairo, but complains much of the fraudulent mixtures sold in its stead ; mixtures which appear to be much like those of which Pliny gives so long a list, and which the Roman and Egyptian apothecaries used to increase the quantity, for which they found a ready sale.

Hasselquist never procured a sight of the plant, nor does it appear that he conversed with any one who had seen it. Bruce was more fortunate. He saw the tree, which he calls Balassum, in some valleys in Arabia ; and at Beder procured the specimens from which he has given his figures. The balsam is yielded in very small quantities, and is carried to Mecca to meet the caravans from Egypt and Syria. The most considerable grove or garden of Balsam trees is in a recess in the mountains, between Mecca and Medina, near a place where Mahommed fought one of his severest battles. He, sensible of the advantage of possessing the precious grove, at once took possession of it ; and asserted, even in the face of his

companions, at the time, that the trees had sprung from the blood of such of the Koreish as had died there.*

When Prosper Alpinus visited Egypt, there was a garden of Balsam trees at Matariah, containing forty plants, set there by a certain Messòner, governor of Cairo. These plants had dwindled to ten, when Bellonius saw the garden ; but Bruce found not one : and this appears to have been the last attempt to form a plantation of Balsam trees.

The Amyris Gileadensis is a small tree, rising to little more than the height of fourteen feet. At five feet from the ground it branches out something like an old hawthorn, but the foliage is scanty and ragged.

The bark is smooth, shining, and of a whitish grey colour, with brown blotches. The leaves are of a bright green, and grow in threes and fives. The flower is insignificant, and generally grows three together, though it is rare to find more than two berries near each other.

The greatest quantity of the balsam flows from the wounded bark. But there are three kinds procured

* A similar story is told in the apocryphal Gospel of the Infancy, viii. 11., that, when the Holy Family reached Matariah, the sweat of the infant Jesus produced the Balsam trees there.

by art: the first and best is the opobalsamum, expressed from the green berry; the second is the carpo-balsamum, from the ripe nut or berry; and the last is obtained by bruising and boiling the young wood.

The twigs, possibly after boiling, are sent to Venice, where they enter into that heterogeneous compound, Venice treacle. From Forskal's account, the twigs sold in the bazaars under the name of Ood (wood) i Balasson are those of the Balsamon Kataf, which produces myrrh.

When Bruce travelled, a certain tribute on the Balsam was paid in kind, by the caravans, to the Sultan, to the Governor of Cairo, to the Pacha of Damascus, and to the Emir Hadjee, or conductor of the pilgrims. But it seems this is discontinued.

The figure and description by Nees von Esenbeck tally with those of Bruce: only the figure of Von Esenbeck is evidently from a young plant; that of Bruce from an aged one, whose bark shows the dark spots whence the Balsam has exuded.

It would, perhaps, be idle to enquire who first conveyed the Balsam from the African coast of the Red Sea to Arabia and the Land of Canaan. Were they

those Ishmaelite merchants that carried spiceries into Egypt ; receiving by the ports on the Red Sea, or perhaps at Ormuz, the cinnamon and cassia of India ? Did any of their settled tribes cultivate the Balsam gardens, and bring the produce to the halting-places of the Desert, to be taken up by the merchant for the great market of Egypt ? Was the garden of Gilead of so ancient a date ?

How little, after all our search, do we know of the great Eastern monarchies ; of the nations that were their servants ; of the realms cultivated for their supplies !

BARLEY.

Hordeum vulgare, — Common Barley.

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINEÆ.

BARLEY.

Exod. ix. 31.
Numb. v. 15.
Deut. viii. 8.
Ruth, i. 22.; ii. 23.; iii. 2. 15. 17.
2 Sam. xiv. 30.; xvii. 28.; xxi. 9.
1 Kings, iv. 28.
2 Kings, iv. 42.
1 Chron. xi. 13.
2 Chron. ii. 10.; xxvii. 5.
Job, xxxi. 40.
Isaiah, xxviii. 25.
Ezekiel, iv. 9.; xlv. 13.
Joel, i. 11.
Judith, viii. 2.
St. John, vi. 9.

THERE are several kinds of Barley ; that generally cultivated in Egypt and by the African Moors is among the best.

The first mention made of Barley tells of the destruction of the crop in Egypt by the plague of thunder and hailstones, for at that season "the Barley was in the ear." The wheat and the rye were not grown up, and so escaped. The time, then, must have been about the beginning of March, for the regular Barley harvest was in April. Pliny says that the people in Spain gathered in their first crop of Barley in April, and that they had two crops a year.

During the siege of Rhodes by the Turks, the Grand-master of the Order of St. John, fearful lest the enemy should profit by the harvest, caused the rye, half-ripe,

to be reaped, and brought within the gates, at the end of April, the Barley being already housed : but the wheat, even in May, was gathered in the green and was fit for nought but fodder for cattle.

In the book of Numbers, Barley-meal is an offering appointed for a man to make in case of jealousy ; and there is a singular coincidence to be remarked in profane history, namely, that the Thracian women offered Barley straw to the regal Diana, the goddess of the chaste. *

That Barley was pretty generally used by the Greeks in their sacrifices we have plenty of instances. For this purpose it was salted and strewed between the horns of the victim ; but, in the Hebrew offering for jealousy, neither oil nor salt nor other seasoning was added.

There is a use of Barley so long known in Egypt, that its discovery was attributed to their god Osiris, which, I am persuaded, the Israelites continued for some time at least after the Exode ; I mean the extracting

* Herodotus, b. iv. sect. 33. Melpomene. He mentions that the Hyperboreans, i. e. the most northern of European nations, sent offerings to Delos wrapped in Barley straw ; so far had the culture of this grain extended before his time.

from it an intoxicating liquor.* The vine was not a native of Egypt; and wine was scarce and precious, for the culture of the grape did not succeed there. The ordinary drink of the people of ancient Egypt was a kind of Barley wine : and Pococke, in our own days, found the Egyptian labourers drinking beer of unmalted Barley.† Now in Leviticus (x. 9.) the priests are forbidden to drink wine or strong drink before they go into the Tabernacle; and in the chapter of Numbers (vi. 3.) concerning the law of the Nazarenes, they are forbidden not only wine and strong drink, but vinegar made from wine or strong drink ; and, in all these passages, strong drink is formally distinguished from wine.

In the book of Deuteronomy, the Promised Land is emphatically called a land of Barley and of wheat ; and it appears that while wheat was reserved for the service of the altar, the tables of the rich, and the purposes of commerce, Barley was the food of the labouring classes. The friends of David brought

* Herodotus, b. ii. sect. 77. Euterpe.

† The Caffres, whose manners and habits, nay even their weapons, resemble those of the ancient robbers of the Nile, make an intoxicating drink from Barley : the Hottentots do the same, but improve it much, and hasten its fermentation, by the infusing of a root which they find in their country, much resembling the Chinese ginseng.

Barley bread for his young men during the rebellion of Absalom ; and Barley was part of the provision of food for the labourers, given by Solomon to Hiram, king of Tyre, for the hire of his workmen and his ships, when he collected the timber for the building of the Temple.

It was the custom of the Jews to date events according to the seasons. The entrance of Holofernes with his army into Judea was in the wheat harvest. The husband of Judith is recorded to have died during the Barley harvest ; and the beautiful history of Ruth is dated from the beginning of the Barley harvest, when she began her gleaning in the fields of Boaz, from whose marriage with her sprang the house of David.

Neither the Babylonish captivity, nor the other great and strange events that befel the Jews, changed their custom as to diet. When Jesus, seeing the multitude that had followed him to listen to his doctrine, had compassion on them, for they were hungry ; he asked what food his disciples had at hand to give unto the people. A few Barley loaves was all the bread he found : but, on the instant, these sufficed for all. As his few and clear and simple precepts,

truly followed, are all-sufficient for the soul, so, by his divine blessing, two small fishes and a few Barley loaves fed the people ; nor were they exhausted, but a store still remained for the after-comers.

How much is taught here ! The poor and hungry must not be left to the temptations of such a state, lest they lose sight of the spiritual teaching they may have received ; and so, in the words of the wise Agur*, "Steal, and take the name of the Lord in vain."

Where spiritual instruction is bestowed, let it be also remembered, that the body is the servant of the soul : and that, unless it be well nurtured, it can render no good service. In vain will words of salvation sound in the ear, if the way to escape temptation be not opened by an education inculcating industry, good habits, and that knowledge of outward things that may preserve the poor from the evil that the wise man prayed against ; because it will enable them to earn their daily bread, that is, the food convenient for

* Proverbs, xxx. 9. The prayer of Agur: "Remove from me vanity and lies: give me neither poverty nor riches: feed me with food convenient for me, lest I be full and deny thee, and say, Who is the Lord? or lest I be poor and steal, and take the name of the Lord in vain."

them ; labouring like St. Paul, and working with their hands the things that are good, even while carrying on their spiritual improvement. So shall the fragments of our Barley loaves become as precious as the bread of fine wheaten flour in the sanctuary.

GREEN BAY.

BAY.

Two plants claim to be the Bay of Scripture: these are —

Laurus nobilis, — *Green Bay;*
Nerium Oleander, — *Rose Bay.*

Linnæan classes and orders, { *Laurus nobilis*, Enneandria Monogynia. / *Nerium Oleander*, Pentandria Monogynia.

Natural orders, { *Laurus nobilis*, Laurinæ. / *Nerium Oleander*, Apocynaceæ.

BAY.

Psalm i. 3.; xxxvii. 35. Daniel, iv. 4.

"I HAVE seen the wicked in great power, spreading himself like a green Bay tree; yet he passed away." —Ps. xxxvii.

This striking exclamation is the only passage in which the Bay tree is named in our version of the Bible; how beautiful, how natural is the comparison!

The word rendered "green Bay tree," in this text, appears, however, to have a more general application, and to mean "flourishing, beautiful, green;" the word tree being understood.* So in the first Psalm, in describing the righteous man, it is simply, "he shall be like a tree planted by the rivers of water." In the fourth chapter of Daniel, Nebuchadnezzar describes himself as *flourishing* in his palace, that is, like a healthy tree.

The Laurus nobilis, or Sweet Bay, is a native of the East; and, although the modern traveller does not

* Æsrach, translated Bay tree in the English Bible, according to Celsius, is "green, flourishing, ornamental:" he instances the Psalms and Daniel.

often meet with it in Judea, it luxuriates in the old gardens of Tyre and Sidon*, and in Palestine itself is found by some forgotten tower, or deserted wine-press.

ROSE BAY.

About a century ago, the pious and eager traveller,

* Modern Zur and Seide.

Hasselquist, was struck with the sight of a valley in Judea, where, by the side of a stream, thickets of various shrubs, especially the Rose Bay, or Nerium Oleander, were in full blossom. The splendour of the Nerium immediately recalled to his memory the tree planted by the rivers of water of the Psalmist, and the spreading Bay tree, to which the wicked man is likened in his prosperity. His letters, addressed to Linnæus, suggested the substitution of the Nerium for the Laurus ; the idea was adopted, and Sprengel and others have implicitly followed it.

The Nerium is certainly one of the most ornamental shrubs of Palestine. We find it enlivening the banks of the Jordan, mixed with the willow and the tamarisk ; Oleander and myrtle in blossom perfume the air around the Lake of Tiberias, according to the relation of recent travellers ; and I have heard my friend Mr. Roberts* talk admiringly of the magnificent Oleanders that grow along the stream that once rendered Petra habitable, and almost fill up the entrance to the valley, while the flaunting bramble,

* David Roberts, Esq. R. A., whose beautiful drawings of Egypt, the neighbourhood of Mount Sinai, and the Holy Land, need no commendation of mine.

loaded with clusters of black berries, hangs from every pinnacle of the carved rock. Thus are the prophecies concerning Edom accomplished. The briar springs up among her palaces.

BDELLIUM.

Amyris comiphora,—Bdellium.

Linnæan class and order, Octandria Monogynia.
Natural order, Amyrideæ.

Gen. ii. 12. Numb. xi. 7.

In the first text in which this precious gum is mentioned, it is said to be found in the land of Havilah, watered by the river Pison, where there is gold, and the gold is good. Now as Pison is one of the rivers of Paradise, and as the learned are not agreed as to which of the rivers now known the name should be applied we can only suppose it somewhere near the country whence we receive good gold and the best Bdellium, and that country is India.

Bdellium is used in the book of Numbers to compare with the manna which fed the children of Israel in the wilderness, and it is said to be clear, and of a whitish colour.

This answers to the description Pliny gives of the best, or Indian, Bdellium ; that of a dark colour being

adulterated, or the gum of a different tree from the true Bdellium.

Bdellium was offered in solemn sacrifices to the greater divinities of Rome, being first steeped in wine. It was also highly valued as a perfume, and employed sometimes to flavour wine.

Sprengel, in his *Flora Biblica*, says that Bdellium is produced by the Borassus flabelliformis, or Lontarus domestica, and that this palm grows wild in Arabia Felix, and on the south coast of Persia.

Professor Royle says that Indian Bdellium is the product of Amyris comiphora, a native of Assam and Silhet, as well as of Madagascar.* M. Perrotet gathered some tears of Bdellium, as he thought, from the Heudelotia africana ; and Lindley, mentioning the circumstance, says that it probably exudes from some tree of the genus Amyris, a native of Arabia Felix.

I have mentioned these different opinions, as an example of the uncertainty in which we continue to this day, as to the real origin, and even the country, of many objects, particularly the gums and resins, which have yet been known and used at a period beyond the

* Illustrations of the Botany of the Himalaya Mountains, p. 176. Royle mentions that the Persians call this gum Budleyuon.

reach of history, and which we find on the lists of the merchants in the very first ages of commerce.

Perhaps the collectors of these costly matters are themselves ignorant that the name they give to one substance, is the same given to another on the farther side of a rapid river or beyond a range of mountains ; and the merchants receive them both as mere varieties, classing them by the higher or lower prices they fetch in the markets.

Notwithstanding these considerations, however, there seems little doubt of the correctness of Dr. Royle's opinion, founded as it is on the researches of Mr. Colebrooke and Dr. Roxburgh. The Bdellium is often called Indian Myrrh, but it does not appear that any tree or shrub, from which real myrrh exudes, is to be found in India, while Bdellium is produced in considerable quantities.

BEANS.*

Vicia Faba,— Common broad Bean.

Linnæan class and order, DIADELPHIA DECANDRIA.
Natural order, LEGUMINOSÆ.

* From the Arabic name for bean, *Phul*, our word pulse, signifying peas, beans, and other vegetables of that family, is derived.

BEANS.

2 Sam. xvii. 28. Ezek. iv. 9.

Beans are only mentioned twice by name in the Bible, but under the general appellation of pulse they are often spoken of. We first find them particularised in the list of stores for the troops, sent by Barzillai to David, when the unhappy king and father withdrew from Zion on account of Absalom's conspiracy. The second passage in which Beans are named is that describing the mixed bread which the prophet Ezekiel was enjoined to eat before he should prophesy.

The Bean is a native of Palestine, Syria, and Asia Minor ; it was cultivated very early in Greece, and well known, but abhorred in Egypt. From Greece it speedily found its way to Italy, and with the Roman armies it was not long before it reached every part of Europe then known. The soil of Britain has been peculiarly favourable to it ; and we have now a number of varieties for the food both of man and cattle.

Nothing is more delicious than the smell of a Bean-field when in blossom, and there is great beauty in the

appearance of the crop. In some parts of the country the haulm, or dry Bean-stalk, is used for fuel, and the poor are as commonly allowed to pull the stubs, as they are called, of a Bean-field, as they are to glean or lease in corn lands. *

The ancient Italians used bread made of Bean flour or meal; but it was heavy and indigestible, like the pease bread of Scotland and the North of England. Rye or wheat flour was often mixed with Bean meal, which made the bread a degree better. Cakes of whole Beans were offered to the deities who fertilised the earth, and were both offered and eaten at funeral ceremonies. The arch-flamen or great priest, who officiated at these ceremonies, abstained altogether from eating Beans, and so did not only the priests but the higher classes of the Egyptians. It is supposed that the dislike of Pythagoras to Beans was owing to his having been instructed in the ceremonies of the Egyptian priests, and having adopted their prejudices. His dislike, however, did not prevent his countrymen from using them largely.

* The burning of Bean-stubble only prevails where canals have not yet carried coals to every man's market-town; elsewhere the stubs are ploughed into the ground as manure of some value.

As domestic slavery existed both in Greece and Rome, so cheap a kind of bread was of great importance ; and that it was cheap we are sure, because the Bean was valued for producing a better return for its cultivation than grain. The Romans fed their horses and other domestic animals upon Beans, and it was probably for the sake of provender that they introduced the Bean into England, as the Roman soldiers, and even the common people of Rome, fed upon wheaten bread ; and a dearth of that luxury more than once caused mutiny in the armies and rebellion in the city.

The seed of the nelumbium, or lotus, is often called the Egyptian Bean. It was much used as food in ancient Egypt, but seems to be neglected now.

The seed-vessel is of a peculiarly beautiful form ; the top, becoming detached when ripe, discloses a chamber with five partitions. This has furnished the Etruscan artists with beautiful models ; and I have seen, in the possession of Samuel Rogers, Esq., a very perfect Etruscan vase, the cover of which, being removed, showed the divisions within, in imitation of the seed-vessel of the nelumbium.

BOX.

Buxus sempervirens,—Box Tree.

Linnæan class and order, Monœcia Tetrandria.
Natural order, Euphorbiaceæ.

Isaiah, xli. 19. lx. 13. 2 Esdras, xiv. 24.

This elegant shrub, or rather small tree, is twice named by Isaiah for its beauty. "I will set in the desert the fir tree and the pine and the Box tree together." And again: "The glory of Lebanon shall come unto thee, the fir tree and the pine and the Box together, to beautify the place of my sanctuary." Such

is the announcement of the preparation for the coming of Messiah.*

In the Apocryphal book of Esdras a very important purpose to which Box-wood was anciently applied is pointed out.

The Spirit that over-ruled the prophet tells him to "prepare many Box trees," and to take five scribes which are ready to write swiftly to assist him to write the inspirations which should come upon him.

Now Esdras was a Levite, and a captive in Babylon in the reign of Artaxerxes, and doubtless made use of the writing materials then common in Babylonia. These, it appears, were tablets of Box, and were probably waxed over that the impression made by the iron style, or pen, might be the more readily received. Such tablets were in use among the writers and designers of ancient Greece and Rome, resembling the

* How elegantly has Pope paraphrased these passages!

"Waste sandy valleys, once perplex'd with thorn,
The spiry fir and shapely box adorn;
To leafless shrubs the flowery palms succeed,
And odorous myrtle to the noisome weed."

Yet how feeble is even his beautiful poem, compared with the prophesying of the sublime Isaiah!

tablets that the painters of Italy, even after the time of Giotto, used in their workshops and schools.

Though paper of papyrus was not unknown, and parchment was manufactured in Asia Minor, they were both too costly for common use; and the Box tablets served for ordinary purposes, and for the first draughts of writings that might require correction. In the form of diptychs, Box tablets long served for private letters, for public despatches, and last, though not least, for secret altar-pieces, which at length were openly displayed, when the progress of Christianity had brought the great ones of the earth to know and bow down to their "Saviour and their Redeemer, the mighty one of Israel*," and his Messiah.

It is thought that the word ivory ought to be translated Box-wood, in Ezekiel, ch. xxvii. ver. 6.: and it does appear more probable, that the rower's benches of the Tyrian galleys should have been of Box-wood rather than of ivory. The chief of the Isles of Chittim, according to Bochart, was Sardinia, which abounds in Box trees; and the prophet says, expressly, that the materials of those benches were brought from the Isles of Chittim.

* Isaiah, lx. 14.

The common domestic uses of the Box-wood, among the ancients, were those where strength and elegance together were desired. For instance, the yoke of Priam's horses was of Box-wood*; and such furniture as admitted of carving, coffers for jewels, combs, and other small ware of the kind, were made of the marbled root of the tree, while the writing-tables were of the plain, smooth, yellowish wood of the trunk.

Among the moderns, Box is still used for combs, and by the carver and the turner; but it has become of great importance, as the best material for blocks for the wood-engraver. It is sufficiently tough, fine in the grain, and little apt to split. It is a native of England, but has almost disappeared, as such, before the spade and the plough. It is cultivated for ornamental purposes, and a dwarf kind is much used for garden bordering.†

* Iliad, Cowper's translation, where the unhappy king goes to beg the dead body of Hector from Achilles.

† The import duty on Box-wood, at 10*s.* per ton, amounted in 1841 to 869*l.*

BRAMBLE.

Rubus fruticosus,— Bramble.

Linnæan class and order, Icosandria Monogynia.
Natural order, Rosaceæ.

Judges, ix. 14. Isaiah, xxxiv. 13. St. Luke, vi. 44.

The first mention of the Blackberry occurs in the oldest familiar fable of which we have any account, and it was related on a most remarkable occasion.

After the death of Gideon, or Jerubbaal, a great crime had destroyed all the worthy persons of his family except one, and the light-minded Israelites had chosen the unworthy and criminal Abimelech to be their judge. While the conspirators were still assembled before the pillar, or altar, at which they conferred the supremacy on Abimelech, Jotham, the son of Gideon, who had escaped the general massacre, appeared on the top of a neighbouring height, and calling to them, related the beautiful fable of the "trees who went forth on a time to anoint a king over them." The wise refusals of the Olive, the Fig tree, and the Vine, and the vain acceptance of the Bramble, with the denunciation of the consequences, are most beautifully and skilfully managed, and I doubt if any thing more perfect in its kind has ever been composed.

Isaiah, foretelling the desolation of Idumea, says, "Thorns shall come up in her palaces, nettles and Brambles in the fortresses thereof, and it shall be an habitation for dragons, and a court for owls." A sublime passage, and one often borrowed or copied, but never better than by the Persian poet, when he says: "The spider spreads the veil in the palace of

the Cesars, and the owl stands centinel on the watch-tower of Afrasiab."

The beautiful moral inculcated by our Saviour in the last text in which the Bramble is mentioned, "Every tree is known by its fruits, for of thorns men do not gather figs, nor of a Bramble bush gather they grapes," is but an enforcement of the blessing on the pure in heart. Another form of the precept, given before by the Holy Spirit, is, "Keep thy heart with all diligence, for out of it are the issues of life!" Such an example as that of the Bramble, taken from the common things seen every day, recalls the words of life far oftener and better than to wear them on the arm, or to bind them upon the brow. We cannot walk abroad but the very hedges speak to us of Him from whom we have received the doctrine that makes us wise unto salvation.

The word translated Bramble in the texts I have quoted above, is rendered bush in some other places; and, among them, in the second verse of the third chapter of Exodus, where it is said that the Angel of the Lord appeared to Moses, in a flame of fire, out of the midst of a bush. Hence the Christians of the Holy Land are taught to believe that a Bramble bush,

still shown in the neighbourhood of Mount Sinai, is the real bush whence the miraculous vision appeared to Moses.

The Bramble is found wild in most countries of the known world. Its angular, prickly, and weak stem trails along the ground, or supports itself upon other plants. Its fruit is agreeable, but has little flavour; and though there is something graceful in its bunches of white flowers, succeeded by clusters of bright black berries, the Bramble has been always looked upon as a nuisance both in the field and in the garden.

The five-lobed leaves have been occasionally used to feed silkworms, during a dearth of mulberry leaves, and the young tops of the Bramble dye animal substances black.

The root is strongly astringent, and a conserve of the fruit is said to alleviate some of the distressing ills attendant on gout.

Hasselquist found the Bramble among the ruins of Scanderette; it flourishes among the rocks of Petra, and I have met with it wild on the top of a high mountain in Brazil.

BRIAR.

Rosa canina,—Briar.

Linnæan class and order, Icosandria Polygynia.
Natural order, Rosaceæ.

Judges, viii. 7. Ezekiel, ii. 6.
Isaiah, v. 6.; xxvii. 4.; xxxii. 13.; lv. 13. Micah, vii. 4.
To which, according to Celsius, should be added,
1 Kings, xii. 11. 14. 2 Chron. x. 11. 14.

In the last two texts, the original word means a scorpion, and also sweet-briar. If the Rabbins, whose

opinions Celsius quotes, are right, then the passage in Judges has the same meaning, and all three refer to an ancient and well known punishment for crimes. This was, forming scourges or rods, not of the twigs of smooth trees simply to beat or whip the offender, but of Briars and thorns to tear the flesh. *

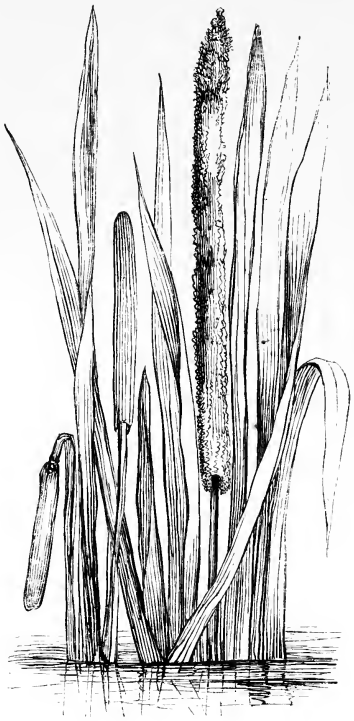
This interpretation will explain the threat of the presumptuous young king Rehoboam, in 1 Kings xii. 11. "My father hath chastised you with whips, but I will chastise you with scorpions," that is, scourges made of Briars. And the same words are repeated in the same chapter, and again in the tenth chapter of the second Book of Chronicles.

Wherever in other parts of Scripture the Briar is mentioned, it is with something of contempt or dislike as a nuisance. The fruit is worthless as food, though brilliant in colour. Its flower, though fair, is generally scentless, its prickles are sharp and hooked, and its trailing root, once in the ground, is eradicated with difficulty, while it is mischievous to the surrounding herbage.

* Judges, viii. 7. Gideon's threat to the rebellious men of Succoth was: "Then will I tear your flesh with the thorns of the wilderness, and with Briars."

The Briar, or Dog-Rose, like the more valuable flowers of its family, is a native of Palestine, and the adjacent countries; where, if it hides the nakedness of the rock, it is often beforehand with the negligence of the husbandman, and seizes upon his field almost before he can determine whether it shall lie fallow. In our colder countries it is more easily kept within bounds. We suffer it to adorn our hedges, and, by cultivation, have obtained from it beautiful varieties to ornament our gardens.

Of the heps, or scarlet fruit of the Briar, the English apothecaries prepare a conserve much used in electuaries. The stocks are used by gardeners to engraft upon, especially in France.



BULRUSH.

Typha latifolia,—Bulrush.

Linnæan class and order, TRIANDRIA MONOGYNIA.
Natural order, CYPERACEÆ.

Exod. ii. 3. Isaiah, xviii. 2.

THE original word in these two texts is *Gome*, and, according to Celsius, who quotes Rabbins without end

as his authority, *Gome* means the papyrus or paper-reed, while the word *Aroth*, translated paper-reed in Isaiah, xix. 7., means any grassy reed whatever.

We read in several ancient authors that the Egyptians made various uses of the paper-reed, and among others that they constructed small vessels with it, and that its fibres served for cordage. So far it suited the purpose of Jochebed, namely, to make an ark or chest in which to lay her young son, but reeds and rushes of all descriptions were used for the same purpose, and many other kinds were as plentiful as the paper-reed or the Bulrush, on the banks of the Nile.*

However, the word being positively the name for papyrus, we have only to regret this small oversight of our excellent translators.

Whatever reed or rush Jochebed employed, the daubing, either with the slime of the Nile, or with the asphaltum so much in use in Egypt for embalming, was quite necessary to render it water-proof, and so fulfil the tender purpose of the mother.

* Mrs. Hannah More is the only writer, as far as I know, that has imagined the ark of Moses was a wicker basket. In one of her sacred dramas she represents Jochebed,

"With a separate prayer each *osier* weaving."

In the *Hierobotanicon* there is a dissertation, full, as usual, of learned quotations, on the different meanings of the word *Agmon*, which is found in several of the sacred books. One of these meanings is Bulrush ; but, as all these are uncertain, I will conclude by copying from Hasselquist a passage showing the great use of these, and other reeds and rushes, in such a country as Egypt.

" There are two sorts of reed growing near the Nile. One of them has scarcely any branches, but numerous leaves, which are narrow, smooth, channelled on the upper surface ; and the plant is about eleven feet high. The Egyptians make ropes of the leaves. They make floats of this reed, which they use when they fish with nets. The other sort is of great consequence. It is a small reed, about two or three feet high, full branched, with short sharp lancet-shaped leaves: the roots, which are as thick as the stem, creep and mat themselves together to a considerable distance. This plant seems useless in ordinary life : but to it is the very soil of Egypt owing, for the matted roots have stopped the earth which floated in the waters, and formed out of the sea a country that is habitable."

In like manner, the Bulrushes in Holland are

planted, and carefully kept by public officers, on account of their matted roots, which are found to be the best binders for the clay of which the dykes and mounds are formed, that defend that industrious and well-peopled country from the inroads of the ocean; and of whose original builders neither history nor tradition has preserved the slightest memorial, though their sons still

> "stand
> Where the broad ocean leans against the land;
> And, sedulous to stop the coming tide,
> Lift the tall rampire's artificial pride.
> Onward methinks, and diligently slow,
> The firm connected bulwark seems to grow,
> Spreads its long arms amidst the wat'ry roar,
> Scoops out an empire, and usurps the shore;
> While the pent ocean, rising o'er the pile,
> Sees an amphibious world beneath him smile:
> The slow canal, the yellow-blossom'd vale,
> The willow-tufted bank, the gliding sail,
> The crowded mart, the cultivated plain,
> A new creation rescued from his reign."

CALAMUS, OR SWEET CANE.

Andropogon Calamus aromaticus,— Sweet Cane.

Linnæan class and order, Polygamia Monœcia.
Natural order, Gramineæ.

CALAMUS, OR SWEET CANE.

Exodus, xxx. 23. Isaiah, xliii. 24.
Song of Solomon, iv. 14. Ezekiel, xxvii. 19.

THE Sweet Cane of Isaiah is the Sweet Calamus of Exodus, the Calamus of the Canticles and of Ezekiel, the difference being only in the translation.

It was reckoned among the principal spices and perfumes of which the precious oil for the service of the tabernacle was composed, and the want of it in sacrifice is one of the sins with which Isaiah reproaches the backsliding Jews. "Thou hast bought me no Sweet Cane with money, neither hast thou filled me with the fat of thy sacrifices."

Yet though the name of Sweet Calamus was handed down by the Greek and Latin botanists and physicians, and though apothecaries continued to use what they called Sweet Cane, neither botanist nor simpler has absolutely discovered the very Calamus aromaticus. Like the spikenard, it has been much sought after, and, if found at all, it is only of very late days.

The apothecaries in the West of Europe, in the 16th century, certainly used the sweet acorus, which they

cultivated in their gardens for the purpose, as a cure for those maladies in which the Sweet Calamus had been thought useful by the ancients.

Clusius, in the researches he made concerning the medicinal plants of the far East, was of course anxious to ascertain the country of the true Sweet Calamus, and to obtain a sight of the plant. His success was small. That it was brought from India, or its borders, seemed certain ; for the Venetians, who used it in the composition of their famous treacle, made no secret of the places whence they got it, and those were the markets to which the Arabs trading to India resorted. In 1595, the Frisian physician, Bernhard Paludanus, gave Clusius a fragment of the Sweet Cane, which he himself had brought from the East. Clusius figured it in his work, and Gerard has represented it in his *Herbal*, probably from the same wood-block. It just suffices to show that it was a small cane, but there is no indication of the species ; and Gerard says that another piece Clusius had from Antony Colina, the learned apothecary, was not more satisfactory.

The merchants, of whom Clusius enquired, told him that their Sweet Cane was reported to grow about Libanus and Anti-Libanus; and certainly there is a

sweet rush or schœnus, called Camel's Hay, which is very fragrant and abounds there. But this cannot be the Sweet Calamus from a far country, equal with the best spices spoken of in Scripture; nor does the Arabian camel's hay which Hasselquist calls a Schœnanthus, and tells us grows near Limbo in Arabia Petræa*, fulfil the conditions on which we can accept it as the true Calamus aromaticus. But the Andropogon, which Royle calls Calamus aromaticus, and which Sir Gilbert Blane and his brother believed to be spikenard, does so in every particular.† It is from a far country; it is very fragrant in itself, and the aromatic oil obtained from it would contribute to the odour of the costly perfume which Moses was enjoined to make, according to the art of the apothecary, for the service of the tabernacle.

Arrian's story, if true, that the Phœnician soldiers

* "Camel's hay, which is a Schœnanthus, grows in the deserts of both the Arabias; it is gathered near Limbo, a port in Arabia Petræa, and exported to Egypt. The Venetians buy it in Egypt, as it enters into the composition of Venice treacle. This was undoubtedly one of the aromatic and sweet plants which the Queen of Sheba gave to Solomon, being to this day much esteemed by the Arabians for its 'sweet smell.' They call it *Nelsi Meccani* and *Iddhur Mecchi*."—*Hasselquist's Travels.*

† See farther on, under the head SPIKENARD; and Mr. Hatchett's elegant essay on the spikenard of the ancients.

in Alexander's army, when on the borders of India, gathered the sweet-scented grass which the soldiers trod under foot, and carried it to their own country for merchandise, applies at least as well to the Sweet Calamus as to the spikenard, for they were sought after almost in an equal degree by the ancient apothecaries; and the modern Europeans, down to a late period, perhaps even preferred the Sweet Cane, as it was an ingredient in their favourite theriacum.

There are numerous aromatic canes and grasses in India, besides the Andropogon in question; one of the most remarkable of which is the koosa grass*, of which so much use is made, both by natives and Europeans, to temper the hard hot winds in the warm season. The roots are woven for this purpose very neatly and ingeniously into screens or mats, which are sprinkled with water and suspended before the open doors or windows, so that the breeze in passing through them is cooled, and regains a portion of its healthy elasticity, while a slight but very agreeable fragrance is diffused around.

The roots of koosa grass have the property of

* Poa cynosuroides.—*Dr. Fleming on Indian medicinal Plants.*

repelling insects, and are therefore laid among clothes of every kind, and the whole plant is highly valued and much cultivated in Brahmin villages. In that ancient fable book the *Hetopadesa* *, the koosa is considered as an emblem of sanctity ; and, wherever a tiger is made to play the hypocrite, he always approaches his intended victim with a blade of koosa grass in his hand, which he holds out as a kind of flag of truce.

Besides these, Dr. Royle mentions several grasses from which fragrant and medicinal oils are extracted, and hints at more not yet perfectly known to European botanists, who are constantly thwarted in their enquiries concerning the plants yielding the drugs of commerce, by the jealousy of the traffickers in those matters.

* Known to us as *Pilpay's Fables.*

CAMPHOR.

Laurus Camphora of Linnæus,—Dryobalanops Camphora of Colebrooke.

Linnæan class and order, ENNEANDRIA MONOGYNIA.

Natural order, { *Laurus Camphora*, LAURACEÆ. / *Dryobalanops*, DIPTERACEÆ.

Song of Solomon, i. 14.; iv. 13.

CAMPHIRE is not named any where in Scripture but in the Song of Solomon; where every perfume, of the

richest and choicest kind, is brought together to furnish comparisons, or rather allegories, of the wide spreading and beneficent influence of the church of Christ. Camphire is more than simply a perfume: it has always been believed powerful to purify the air, and cleanse it from foul and infectious qualities, and thus it is doubly proper for the purpose of the text.

The two sorts of Camphire named above are produced by very different trees, but the fatty gum or resin of both has the same properties, except that the Camphor of the Dryobalanops, being harder, does not so readily waste away in the open air.

The Camphor of the Dryobalanops is so precious, that it is mostly reserved for the consumption of the mandarins of China and Japan, and hardly ever finds its way to Europe.

The plant is a native of Sumatra and Borneo. It is a very large tree, and within the trunk large cavities are found, containing both oil and Camphor. The oil is supposed to be the first state of the Camphor, which is found in solid heaps as large as a man's arm, weighing eleven or twelve pounds.

If Solomon, as the texts seem to imply, planted

Camphor in his vineyards of Engeddi, it was most probably the Laurus Camphora, which might better suit the climate, and was easier to procure. It is cultivated all over the South of India, and furnishes the Camphor of commerce.

The Camphor is obtained by distillation, from the leaves of the flowers, and the branches of the tree.

Other species of Laurus also furnish it. The Laurus Cassia with broad pointed leaves, a native of Asam and Silhet, gives out a good deal from its roots; and the cinnamon itself yields a proportion. Most of the Camphor that reaches the European markets is collected in the Island of Formosa, whence the Chinese junks convey it to Canton, to await the European and American traders. The chests made of Camphor wood are eagerly bought, as they have the reputation of securing whatever is put into them from the attacks of insects.

I have given the figure and description of the true Camphire above, from deference to our beautiful version of the Scriptures; though I believe the text quoted from Solomon really refers to the next cut, and that the plant there described is the real Camphire of the Canticles.

CAPHER, CUPROS, CYPRUS.

Lawsonia inermis,—Hennah.

Linnæan class and order, Octandria Monogynia.
Natural order, Lythrariæ.

Most authors of note who have attended to the botany of the Scriptures, are of opinion that the word in the text should not have been translated camphire at all,

but that the plant meant is the Henna, or Lawsonia Inermis of the moderns. It is the Cupros of Dioscorides, and the Hebrew name is Capher. It grows plentifully in Egypt, and in most parts of the East as far as India. The flowers grow in graceful fragrant clusters, often used by the young women to adorn their hair; and from the leaves a paste is compounded, with which every Eastern beauty colours her hands and feet. Nay, so ancient is the custom, that mummies have been found with their nails dyed with Henna. In later times Mahommed used Henna as a dye for his beard, and the fashion was followed by several of the caliphs.

Pliny tells us that the best Cupros, or Cyprus, was brought from Ascalon; and it was in the neighbourhood of that place, that Clusius found it most abundant. Gerard raised some from seed, and had flourishing plants in his own garden, besides some that he set in the Earl of Essex's garden at Nine-Elms. In his time it was looked upon as akin to the privet and the phillyrea, which last was Queen Elizabeth's favourite evergreen. It never flowered with Gerard, but Miller had it in bloom at Chelsea, where it was kept in a hothouse.

The figure of the leaf and berry, given by Gerard, is tolerable; and that of the flower, in Rauwolf's *Travels*, is really good. Sonnini's engraving, however, is a beautiful thing, which he seems to have taken pains about, in proportion to his admiration of the plant, which really is extravagant.

The use of Henna is scarcely to be called a caprice in the East. There is a quality in the drug which gently restrains perspiration in the hands and feet, and produces an agreeable coolness, equally conducive to health and comfort.

If the Jewish women were not in the habit of using Caphor, or Henna, before the time of Solomon, might it not have been introduced among them by his wife, the daughter of Pharaoh; in which case it would be natural for him to plant it for her use in the vineyards of Engeddi?

CAPER.

Capparis spinosa,— Caper Bush.

Linnæan class and order, Polyandria Monogynia.
Natural order, Capparidæ.

Ecclesiastes, xii. 5.

This is one among the twenty-two plants which the Rabbins say are named as thorns in Scripture. But in that most beautiful chapter of Ecclesiastes, quoted

above, it is used figuratively, and very properly translated *Desire* in our version.

The metaphor here made use of is derived from an ancient practice, not quite obsolete in some countries within the memory of man, namely, that of presenting to the guests at a feast, some time before approaching the table, condiments of various kinds for the purpose of exciting appetite. Of these condiments, a very favourite one in the East was the flower-buds of Capers, preserved either in salt and water, or in vinegar. * But the Preacher says that the Capers, that is, the stimulants that used to excite the desire for food, "shall fail : because man goeth to his long home, and the mourners go about the streets."

Celsius has, in the *Hierobotanicon*, brought a world of learning, Heathen and Rabbinical, to prove the meaning of the word in this passage; the fitness of which is enhanced by the circumstance that the Caper bush, a low trailing shrub, loves to grow undisturbed among rocks and ruins, and was constantly to be found overhanging the antique tombs that

* Its qualities are stimulant, antiscorbutic, and aperient. The Caper bush is a native of the South of Europe and the Levant. The amount of the duty, 6*d.* per pound, in 1841 was 210*l.*

sanctified a valley overlooked by the palace of the Preacher.

This beautiful plant is rooted in many a crevice of the palace of the Cæsars at Rome; it spreads its green glossy leaves and starry white flowers, with their long purple anthers, over the ruins of that once stirring place, the Colosseum; and clothes the arches of the Temple of Peace with festoons which adorn, without hiding, their beauty. The ancient tombs of the Campagna are frequently hung with it; the rocks of Naples are favourable to it; and it has fixed itself not only on the mouldering cliffs of Malta, but in the narrow crevices of the stones of the fortification.

LAURUS CASSIA.

CASSIA.

Laurus Cassia, — *Cassia Buds.*
Cassia Fistula, — *Common Cassia.*

Linnæan class and order, { *Laurus Cassia,* ENNEANDRIA MONOGYNIA. / *Cassia Fistula,* DIADELPHIA DECANDRIA.

Natural order, { *Laurus Cassia,* LAURACEÆ. / *Cassia Fistula,* LEGUMINOSÆ.

CASSIA.

Exod. xxx. 24. Psalm xlv. 8. Ezekiel, xxvii. 19.

THE text from Exodus numbers Cassia with the principal spices which should compose the ointment for the tabernacle; the Psalmist names it among choice perfumes, and Ezekiel among the precious merchandise of Tyre. The first two texts seem certainly to designate the Laurus Cassia, the last may comprehend both it and the Cassia Fistula. The Laurus Cassia, which produces the flowers and buds of Cassia of commerce, is a native of India, China, and the Eastern islands; and the commonest variety so closely resembles the true Cinnamon tree in appearance, and in the flavour of the bark, that one not accustomed to them would with difficulty distinguish them.

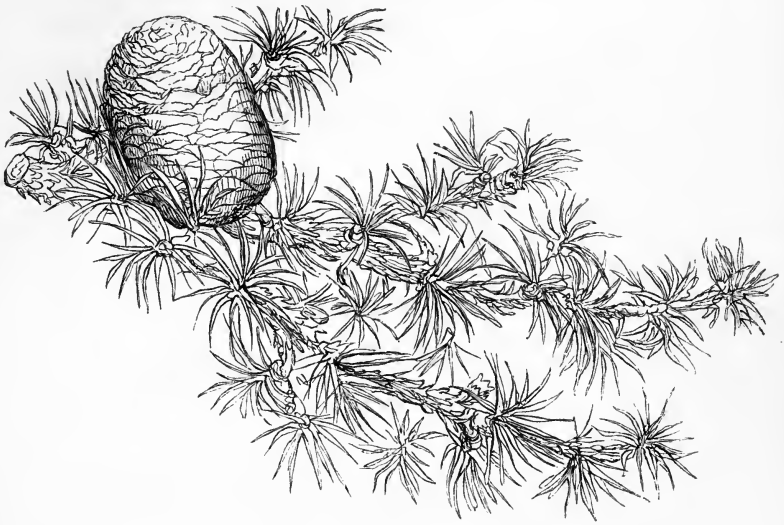
It is curious to observe that Ezekiel, in his account of the merchandise brought to Tyre, groups together the Cassia, calamus, and bright iron. Now the Cassia and calamus certainly came from India, and the bright iron was no doubt of the same kind now so prized, and which the native Hindoos, with their very small furnaces, prepare with a perfection to which European ingenuity has not reached.

CASSIA FISTULA.

The Cassia Fistula is a tree of larger growth, sometimes reaching the height of forty or fifty feet. It is a native of Arabia and of Egypt; and it is to the

Arabs that we owe its use, and the method of preparing it. The drug is the round pod, from ten to twenty inches long, with its seed. The pod is subdivided by transverse scales separating the seeds, which are embedded in a sweet pulp. It is prepared in whole pods, with only the trouble of alternate heaping up and spreading for a certain number of days. The taste is so agreeable, that the Arabs and Egyptians make comfits of it, which used to be brought into Europe as a gentle and agreeable aperient; and, in its native country, the Cassia Fistula is valued as a perfume.

Cassia Fistula, of a kind differing little from that of Arabia, has been found in the woods of South America.



CEDAR.

Pinus Cedrus,— Cedar of Lebanon.

Linnæan class and order, Monœcia Monadelphia.
Natural order, Coniferæ.

CEDAR.

Leviticus, xiv. 4. 6. 49. 51, 52.
Numb. xix. 6.; xxiv. 6.
Judges, ix. 15.
2 Sam. v. 11.; vii. 7.
1 Kings, iv. 33.; v. 6. 8. 10.; vi. 15, 16. 18. 20.; vii. 2, 3. 12.; ix. 11.; x. 27.
2 Kings, xix. 23.
1 Chron. xvii. 6.
2 Chron. ii. 8.; ix. 27.; xxv. 18.
Job, xl. 17.
Psalms, xxix. 5.; lxxx. 10; xcii. 12.; civ. 16.; cxlviii. 9.
Song of Solomon, i. 17.; v. 15.; viii. 9.
Isaiah, ii. 13.; ix. 9, 10.; xiv. 8.; xxxvii. 24.; xli. 19.; xliv. 14.
Jerem. xxii. 7. 14. 23.
Ezekiel, xvii. 3. 22, 23.; xxvii. 5. 24.; xxxi. 3. 8.
Amos, ii. 9.
Zeph. ii. 14.
Zach. xi. 1, 2.
1 Esdras, iv. 48.; v. 55.
Ecclus. xxiv. 13.; l. 12.

Besides the numerous texts cited above, there are several passages in Scripture where the Cedar is simply called the Glory of Lebanon.

It is not impossible that the Cedar of Leviticus may be a juniper*; for it is only used as that fragrant shrub might be, namely, as a purification for a person or a house infected with leprosy. The Cedar was not a native of Egypt, nor could it have

* The Cedar wood in common use, so soft in substance and red in colour, is the wood of a West Indian juniper. Its fragrance renders it the most agreeable of pencils.

been procured in the desert without great difficulty: but the juniper is most plentiful there, and takes deep root in the crevices of the rocks of Mount Sinai; together with that variety of the bramble sometimes called Rubus-sacer because it grows there, and an elegant species of white broom.

The first text in Numbers might also be read juniper with propriety; but not so the second. There the Cedar is magnificently placed. When the faithless prophet, willing to curse the people of God, is forced by the Spirit to bless instead of cursing, he compares the tents of Israel to "the trees of a garden which the Lord hath planted, lign aloes and the Cedars by the waters."

Next we have the Cedars of Lebanon in the beautiful fable of Jotham, too noble to be subjects of the worthless bramble: and then the texts from the five historical books, beginning with the second of Samuel, and ending with the second of Chronicles, acquaint us with the various domestic uses of the timber of the Cedar.

The negotiations of the King of Tyre with David and Solomon, for the cutting down of the timber and the carriage of it when cut, teach us that at that

period Cedar was used generally, in the surrounding countries, in the construction of temples and palaces; as there is no appearance of any thing out of the ordinary course of business in the agreement. A certain number of workmen were to be sent from Jewry, to work under the more experienced wood-cutters of Tyre; and the payment was to be in provisions, partly for the consumption of the labourers, partly for the supply of the Tyrian market.

Nothing could be fitter for the purpose required than Cedar wood. Its size and straightness, and above all its durability, were most desirable for buildings that were to last. The beauty of the wood, the high polish of which it was susceptible, and its fragrance, also recommended it equally for the temple and the palace; and that for centuries it continued to be sought for such purposes, we find from Jeremiah's denunciation of woe to the rich, who built themselves houses with large rooms, and made wide their windows, and with ceilings of Cedar, and painted with vermilion.

As to the carriage of the Cedars from Lebanon to Jerusalem, the timber was floated down some of the mountain streams, mostly down the Nar el Kelb, to

the beach, and thence towed by the ships of Hiram to Joppa, the nearest seaport to Jerusalem.

The prophet Ezekiel tells us, in the twenty-seventh chapter of his prophecies, that the masts of the Tyrian ships were of Cedar*; and, doubtless, so likewise were those of Solomon's fleet of Tarshish, which was in part manned by Tyrians, and in part by the maritime tribes of Israel.

The Cedar is merely named in the book of Job, as an object with which to compare the strength of behemoth; and so, in the eightieth psalm, the prosperity of Israel is compared to the wide-spreading branches of the Cedar, and in the ninety-second the Cedar is a type of the virtuous man. But in the twenty-ninth how grand is the introduction of the Cedar! "The voice of the Lord is upon the waters; the God of glory thundereth. The voice of the Lord breaketh the Cedars; yea, the Cedars of Lebanon."

In the last two passages in which the Cedar is

* The ancient Greeks and Romans commonly used fir for their masts: but the enormous ship which conveyed the obelisk of the Vatican from Egypt to Rome had for her mast a very large and tall Cedar, cut in the woods of Cyprus. The ship itself was sunk in the harbour of Ostia, by order of Caligula, to serve as the foundation of a pier and some towers.

named by the Psalmist, it is as one of the wonderful and beneficent works of God, and calling upon it with all created beings to join in his praise.

In the mystical Song of Solomon the Cedar is always an emblem of strength or beauty.

What sublime poetry is there in the first mention of the Cedar by Isaiah! "The lofty looks of man shall be humbled..... For the day of the Lord of Hosts shall be upon every one that is proud and lofty, and upon every one that is lifted up; and he shall be brought low: and upon all the Cedars of Lebanon, that are high and lifted up." Then how apt an illustration do we find, in the prophecy concerning Samaria, of the vain-glorious, who say: "The sycamores are cut down, but *we* will change them into Cedars!" When Israel rejoices over fallen Babylon, what can be more significant than the exclamation, "Yea, the fir trees rejoice at thee, and the Cedars of Lebanon, saying, Since thou art laid down, no feller is come up against us!" How consoling to the penitent and broken-hearted Hezekiah the prophecy against Sennacherib, who boasted that he would cut down the tall Cedars of Lebanon!

But, oh! how infinitely more precious to us who

enjoy the fulfilment of it, is the promise: "I will plant in the wilderness the Cedar, the shittah tree, and the myrtle, and the oil tree: I will set in the desert the fir tree, and the pine, and the box tree together: that they may see, and know, and understand together, that the hand of the Lord hath done this, and the Holy One of Israel created it."

The very remarkable passage in Jeremiah concerning the Cedar, I have already noticed; and the texts in Ezekiel blend with other portions of the subject, from which it would not be well to detach them.

The figurative mention of the Cedar by the three minor prophets, Amos, Zephaniah, and Zachariah, is admirable in their text, but not to be compared with the passages already quoted from the first of prophets.

Among the apocryphal writers, Esdras simply names Cedar among the materials granted by the kings of Babylon for the building of the second Temple: but, in the hands of the author of Ecclesiasticus, the Cedar is once more the subject of poetry. In the praise of Wisdom, she is exalted like a Cedar in Lebanon. In the commendation of holy men, of Simon the son of Onias, who repaired and fortified the Temple, the son of Sirach says he was as "the morning star in the

midst of a cloud; . . . he stood by the hearth of the altar, compassed with his brethren round about, as a young Cedar in Libanus."

Well might the Cedar be called the glory of Lebanon. The magnificence of the living tree, and the beauty, fragrance, and durability of the timber, distinguish it among all the trees of the mountain forest: but time and neglect have nearly disrobed Lebanon of its glory. These many centuries have the Cedars served for shelter and firewood to innumerable wandering tribes, and to settled barbarians as wasteful. A continual petty warfare has often enveloped large tracts of the mountain in accidental or mischievous fires: and the traveller looks with sadness on the few remaining patriarchs of the woods, scarce daring to hope that any of the young plants, which year by year spring up around, will be suffered to reach maturity.*

The ancients believed that the Cedar of Lebanon

* The Cedar of Lebanon thrives admirably in England, and is pretty widely spread over the country. Those in the physic garden at Chelsea were planted in the year 1683. The growth of these trees is very rapid for the first fifty years; but there is every reason to believe that after that it is slow, and that the Cedar does not arrive at its proper bulk in less than two centuries. The wood-cut that heads this article was drawn from a branch gathered in the grounds of Holland House.

preserved animal substances from putrefaction ; and oil of Cedar is supposed to preserve books and writings from the attacks of insects. I do not know on what authority Lord Bacon says that Cedar continues sound for a thousand years ; but, according to Pliny, Cedar wood of near two thousand years old was found in the temple of Apollo at Utica.

Most Eastern travellers have been anxious to see the Cedars of Lebanon; and the gradually diminishing number of those most ancient ones, emphatically called "the Cedars," has called forth many a lamentation.

Pococke measured the largest remaining tree on Lebanon in his time, and found it twenty-four feet in circumference. Forty-two years earlier, Maundrel had measured another of thirty-six feet in girth. That great tree was blown down, and lay where it fell when Pococke visited Lebanon and took some of the wood, which was white and of great fragrance. Eighty years later, Dr. Richardson found but seven of the fifteen which Pococke had counted of that ancient group.*

	A.D.	TREES.
* Seen by Bellonius -	1550 -	28
Chris. Fischner	1556 -	25
Leonard Rawwolf	1575 -	24

The most flourishing of the younger forest were the trees near the village of Eden; and it is remarkable that Ezekiel speaks of the trees of Eden as the choicest of Lebanon.

The inhabitants of Mount Lebanon devoutly believe that the seven ancient trees were in being in the days of Solomon and Hiram; and they have also a superstri-

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	A.D.	TREES.	
Seen by John Jacobi	1579	26	

Of these 26 Jacobi confesses two were entirely dead, and one had but one healthy branch. Therefore there is no contradiction of Rawwolf.

Nicholas Radzivil	1583	24	
Jean Villamont	1590	24	
Chris. Harant	1598	24	
Dandini	1600	23	
Wm. Lithgow	1609	24	

This traveller saw, at 9000 paces' distance, 17 others of a large size.

Eugene Rogers	1632	22	and two lying prostrate.
Boullaye le Gouze	1650	22	
Thevenot	1657	23	but he counted some small ones.
De la Roque	1688	20	

"Nous nous reposâmes," says this traveller, "plus de deux heures, et nous dinâmes même au milieu de cette petite forêt. Elle est composée de vingt Cèdres d'une grosseur prodigieuse." — *Celsius's Hierobotanicon.* It would seem by this last that Lithgow and Thevenot had counted carelessly.

Maundrel found growing	1696	16
Pococke	1738	15

tious notion that they cannot be counted, every person giving a different number who sees them. Every year, on the anniversary of the Transfiguration, the Maronites, Greeks, and Armenians perform mass upon a homely stone altar reared under the most venerable of the trees.

These pious, though mistaken, acts lose the evil character of superstition, when we look upon them as a means of drawing together, in peace and love, the half-wild and lawless inhabitants of the dens and ravines of the mountain.

> " There where the tempest rives the hoary stone,
> The wintry top of giant Lebanon,
> Fierce, hardy, proud, in conscious freedom bold,
> Their stormy seats the warrior Druses hold:
> Yes! valorous chiefs, while yet your sabres shine,
> The native guard of feeble Palestine,
> Oh! ever thus, by no vain boast dismay'd,
> Defend the birthright of the Cedar shade."*

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* Since Heber wrote these lines, the hardy tribes of the mountain have answered to the call, and delivered the inhabitants of Palestine from another Egyptian bondage.

CHESNUT.

Fagus Castanea,— Sweet Chesnut.

Linnæan class and order, Monœcia Polyandria.
Natural order, Corylaceæ.

CHESNUT.

Gen. xxx. 37. Ezekiel, xxxi. 8.

The first time the Chesnut is named in the Bible is in the account of Jacob's management of Laban's flocks and herds. The second mention of it is by Ezekiel, as one of the most beautiful of trees.

It is a native of the more temperate parts of Asia and the greatest part of Europe, even so far north as Britain*: but, with us, the finest of the fruit is small, and scarcely worth collecting, except for feeding deer; while, in the South of Europe, it is a very important article of the food for man.

The timber of the Chesnut is handsome and durable. It is particularly fit for the cooper's use, as it stands well an alternation of wet and dry. This quality is particularly useful in a country like Palestine, in many parts of which the cultivation of

* There were formerly Chesnut forests in England. One to the north of London is especially mentioned in history, and perhaps it may have furnished the quantity of Chesnut timber that is found in the old houses of London. The duty on foreign Chesnuts, 2*s*. per bushel, amounted in 1841 to 2020*l*.

the ground is chiefly carried on by means of irrigation; and Chesnut is equally fit for troughs, pipes, water wheels, and the beams of the shadoof, or watering bucket.

This beautiful tree vies with the oak in long life. There is one at Tortworth, in Gloucestershire, which was a very large tree 680 years ago: but, in this country, young Chesnuts are mostly grown in coppices, and cut in rotation for hop-poles, on account of their durability; and the same quality would probably recommend them for vine props in Judea.

The vintage of the Holy Land, important even in modern times, required, in the flourishing period of Israel's prosperity, numerous vessels for treading out the juice of the grape, or, in large vineyards, receiving it from the wine-press, and carrying it through its following stages, till it was fit for the earthen or leathern bottles in which it was preserved either for home consumption or exportation.

For all these purposes there is no better timber than Chesnut, which, from the place where Ezekiel mentions it, must have formed part of the forests of Lebanon in his time, as it does to this day.

CINNAMON.

Laurus Cinnamomum, — Cinnamon.

Linnæan class and order, MONANDRIA MONOGYNIA.
Natural order, LAURINÆ.

Exodus, xxx. 23.
Proverbs, vii. 17.
Song of Solomon, iv. 14.
Ecclus. xxiv. 15.
Revelation, xviii. 13.

ONE of the principal spices which composed the precious ointment for the tabernacle, and always

highly valued for its perfume. The necessity for strong and sweet perfumes must have been imperious, where sacrifices of blood were performed in the very temples. Had it not been for the burning of incense and sweet spices, neither the Temple of Jerusalem, nor those erected by the heathen to their superior gods, could have escaped the odour of a slaughter-house. Hence the value set upon fragrant gums and spices, and probably the custom of adorning the victims, as well as the votaries, with flowers and fragrant evergreens.

The Cinnamon tree, or rather shrub, is a native of Ceylon, and other islands near the equator. Neither the leaves nor flowers emit any smell; and the pleasure of a walk through Cinnamon gardens owes little to the fragrance of the plant itself, until the season for gathering the spice arrives. Then it is charming; and the busy groups of Cingalese, peeling the twigs, which are cut annually, add interest to the beauty of the gardens. The bark is peeled off with astonishing quickness and dexterity, by means of a small sharp iron instrument, and laid in the sun, where it curls up into the shape of the Cinnamon sticks of the shops.

When Herodotus wrote, the western world was supplied with Cinnamon by the Phœnicians, who procured it from the Arabian merchants. These merchants professed not to know whence it came; and asserted that they procured it by means of certain large birds, who had stores of it in their nests. They found the means, they said, to decoy the birds to a distance, and robbed the nests before they had time to return. This story proves both the very ancient use of the spice, and the great jealousy with which the Arabs, or Ismaelites, guarded the secrets of their commerce.

The Dutch, in succeeding to the spice trade of the ancient Arabs, did not fall behind them in cunning. When the Cinnamon crops were over-abundant, whole stacks of the fragrant bark were burned on the sea-shore, that the price of spice in Europe might be kept up: and, at that season of the year, the ships sailing the Indian seas were regaled with the spicy odours;

"And many a league
Cheer'd with the grateful smell, old Ocean smiled."

CITRON.

Citrus Medica,— Citron.

Linnæan class and order, POLYANDRIA ICOSANDRIA.
Natural order, AURANTIACEÆ.

CITRON.

Lev. xxiii. 40.

The text in Leviticus translated in our version, "And ye shall take you, on the first day, the boughs of *goodly trees*," is, as I learn from Celsius, rendered Citron trees by Onkelos; and this reading is confirmed by Rabbi Salomon and other Hebrew critics.

It is certain that from an early period Citrons were offered at the Feast of Tabernacles, as emblems of fruitfulness; and that, in such numbers, that when King Alexander Jannæus, in one of his freaks of tyranny, attacked the people while engaged in their religious duties during the feast, he and his party were repelled by the worshippers, who, having no other weapons, pelted them with citrons, so that the king narrowly escaped with his life. *

The modern Jews continue the practice of offering Citrons at the Feast of Tabernacles. In London, considerable sums of money are expended in importing them of the best kind, for the purpose. They must be

* About 100 years before Christ.—*Josephus.*

without blemish, and the stalk must still adhere to them.

After the feast is over, the Citrons are openly sold, and the money produced by the sale is placed in the common treasury, as part of the provision for the poor of the congregation.

The Jewish ladies, it would seem, are in some particulars quite as fanciful as Christians; and they particularly covet the possession of a Citron that has been offered at the Feast of Tabernacles, as an emblem of fertility and plenty. Therefore the husbands, brothers, fathers, and sons, are eager to purchase; and hence the price paid for these consecrated Citrons is often more than double the original cost.

Some commentators have supposed that the apple of Solomon's Song is the Citron; but there is better reason to consider the quince as the apple of that poem.

The beautiful proverb, "A word spoken in season is like apples of gold in pictures of silver," should be, according to some readings, Citrons of golden colour in trays or baskets of silver; but here, too, again, the preference is claimed for the quince, and apparently with justice.

The use of the Citron, however, is very ancient, as a medicine, and as flavouring many of the cooling drinks of the East. It is certain, also, that for thousands of years it has been offered in the sanctuary of the living God by his people; therefore, though unnamed in our version, I have placed it among the goodly trees of the Scripture herbal.

COCKLE.

Agrostemma Coronaria,— Corn Cockle.

Linnæan class and order, Decandria Pentagynia.
Natural order, Carophylleæ.

Job, xxxi. 40.

Wherever the ancient cultivated grains, barley and wheat, are grown, some of the varieties of Corn Cockle

appear. The English Corn Cockle, or Rose Campion, differs from those of the Levant, in being of larger growth, with a smaller flower and less brilliant colour.

The Bladder Cockle, or Campion, which the ancients looked upon as a specific cure for the bite of venomous reptiles, grows almost as freely with us as in the corn lands at the foot of Mount Caucasus; and, wherever the Cockle grows, it is a peculiar nuisance to the farmer.

Such being the case, I cannot perceive why we should abandon the old reading of our translators, to replace it with either hoary nightshade, or monk's-hood, or dwarf elder, plants little likely to thrive quickly after the plough or spade; whereas the Cockle springs up with the corn, at the same time and season. Celsius himself, though he proposes the aconite, leaves the matter uncertain. The same Hebrew name, *Baescha*, is rendered wild grapes in our version of Isaiah.

The Agrostemma was one of the flowers employed by the ancient Greeks and Italians in braiding chaplets for crowning the guests at feasts, and hence the trivial name Coronaria. Several authors have enumerated the plants consecrated to this use; and even Linnæus calls one of the orders, in his *Fragments of a Natural System*, Coronariæ, on this account.

CORIANDER.

Coriandrum sativum,— Garden Coriander.

Linnæan class and order, Pentandria Digynia.
Natural order, Umbelliferæ.

Exod. xvi. 31. Numb. xi. 7.

The two texts wherein the Coriander is mentioned only speak of it for the sake of comparing the manna,

which fed the Israelites in the Desert, with it, as to size and shape. It has been from most ancient times, and still continues to be, a favourite condiment in the East. It is an essential ingredient in the curry-stuff which flavours the dry rice of the poor pariah, as well as in the dishes of his Mussulman lord and his European master. All alike chew it, or hold it in the mouth, for the sake of its pleasant flavour; and the confectioners of Europe, by encrusting it with sugar, form it into a delicious comfit.

The Coriander is an annual umbelliferous plant, native to all the countries bordering on the Levant, and to the plains of Tartary. In Pliny's time, the best, both for medicine and seasoning, was brought to Rome from Egypt; and now a good deal is imported into England from the Mediterranean. It thrives so well, however, with us, as to have become almost wild; and a good deal is cultivated in Suffolk, for the use of the apothecary, the confectioner, and the distiller.

COTTON.

Gossypium herbaceum, — Cotton Shrub.

Linnæan class and order, MONADELPHIA POLYANDRIA.
Natural order, MALVACEÆ.

COTTON.

Esther, i. 6.

Celsius devotes six pages of his second volume to show that the Hebrew *Carpes* (the Carbesa of the ancients, and the Persian Kirbas) means Cotton.

The scene of the history of Esther being in a country where Cotton, from time immemorial, has furnished the greater part of the national clothing, gives strong support to his opinion. If the Jews were not in the habit of cultivating Cotton before the great captivity, they probably brought the plant, and the method of cultivating it, from Babylon with them to Jewry, on their restoration. It is certain that they raised a sufficient quantity for the purposes of commerce in after times, for Pausanias speaks of the Cotton of Judea as being of a yellower hue than that of Egypt and other places.

The delicate veils spoken of by the ancient poets, as seeming to be of woven wind, and represented in some antique pictures and on several mummy-cases, could scarcely have been of linen, but were in all

likelihood of muslin ; and it appears that the neighbourhood of Jerusalem was celebrated for manufacturing veils of fine quality and elegant patterns.

If Celsius is right in reading Cotton in the text he quotes, then the hangings of the palace of Ahasuerus which was named Shushan, or the Lily, were of white Cotton and blue, fastened with cords of fine flax or Cotton, and purple, to rings of silver.

The drapery of much of the Egyptian sculpture seems intended to represent some striped elastic stuff; and we know that extreme whiteness was one of the qualities required in the dresses of the Egyptian priests and priestesses. That such elastic striped stuffs were anciently made in Egypt, we have strong presumptive proof, in the fact that our dimity takes its name from the town of Damietta, whence it was first brought into the western markets of Europe.

The Cotton cultivated in Malta is of the herbaceous kind, and is the deepest coloured I ever saw ; the cloth made from it being rather brown, than of the fleshy tint of the Chinese nankeens: but neither can compare with the beauty of the cloths woven from the white-woolled plant.

The Cotton seeds yield a considerable quantity of oil; and it has more than once happened, that stray seeds, having been left in Cotton bales, have given out sufficient oil to take fire on the admission of air to the bale, and thus caused lamentable destruction of life and property, by consuming ships at sea.

CUCUMBER.

Cucumis sativus,— Common Cucumber.

Linnæan class and order, Monœcia Syngenesia.
Natural order, Cucurbitaceæ.

Numb. xi. 5. Isaiah, i. 8. Baruch, vi. 70.

The first mention of the Cucumber is by the rebellious and murmuring Israelites. When in the desert, they reproached Moses with having decoyed them out of a

land of plenty, "of Cucumbers and of melons," &c., to perish in the wilderness.

Egypt is still a land of Cucumbers; and the picturesque image of the prophet, "The daughter of Zion is left like a cottage in a vineyard, like a lodge in a garden of Cucumbers," is constantly recalled to the memory of the modern traveller in Egypt, by the vast plantations of Cucumbers on the banks of the Nile. There, as of old, the peasant has his lodge, that he may water his rich plants with the shadoof, or, as the Scripture expresses it, "by the foot;" and that he may guard his little property from the robbers of the Nile, who, though of a different class, are not less formidable to the cultivator than those of the time of Herodotus.

The homely expression of Baruch is curious, as a piece of ancient agricultural costume. "As a *scarecrow* in a garden of Cucumbers keepeth nothing, so are their gods of wood."

Besides the common Cucumber, there is a delicious species peculiar to Egypt, called the Cucumis Chate.* It grows in the earth around Cairo after the inun-

* Linnæus. Called Abdellavi by Alpinus. Highly praised, as a fruit, by Hasselquist.

dation of the Nile, and nowhere else in Egypt. The fruit is sweet, cool, watery, and in substance like the melon: it is eagerly sought after by the highest classes, who assert that it is the wholesomest fruit in the country.

CUMMIN.

Cuminum Cyminum,— Cummin Seed.

Linnæan class and order, PENTANDRIA MONOGYNIA.
Natural order, UMBELLIFERÆ.

CUMMIN.

Isaiah, xxviii. 25. 27, 28. St. Matthew, xxiii. 23.

This umbelliferous plant is a native of all the countries bordering on the Mediterranean, and is found also in Ethiopia. It was cultivated by the ancients, both as a condiment and as a medicine.

In the chapter of Isaiah wherein it is mentioned, he speaks of the season for sowing the Cummin seed, and of the gathering and threshing it; which last operation was performed by beating it with a rod, and not by threshing with a flail, treading out by cattle, or driving the threshing wain over it, as was practised with regard to bread corn.

Cummin is still cultivated in Palestine, whence it is exported in considerable quantities; but England is chiefly supplied from Malta. In all those nations which use the rite of circumcision, Cummin is of some importance; because the bruised seed mixed with wine is used as a styptic after the operation, the officiating priest himself mingling and applying it.

In medicine, generally, Cummin seed is little used

now, except as an ingredient in plasters; and these are seldom employed for the human subject, though highly valued for their efficacy in the ulcers of cattle of all sorts. In the warm pastoral parts of Jewry, the herds are particularly afflicted with ulcers arising from the bites of insects, or the worms which come from the eggs deposited in the skin by several sorts of flies; and, as Cummin has always been looked upon as a sovereign remedy for all these evils, we must suppose it to have been, next to bread corn, one of the most important grains cultivated by the Jews.

The mention of Cummin in St. Matthew is as follows, in the characteristic description of hypocrites by Christ. "Woe unto you, Scribes and Pharisees, hypocrites! for ye pay the tithe of mint and anise and Cummin, and have omitted the weightier matters of the law, judgment, mercy, and faith: these ought ye to have done, and not to leave the other undone."

Let us then pray for judgment to discern the right; mercy towards our fellow-creatures, however low their estate; and faith, that the blessing of God will follow the works of mercy, and sooner or later give them full effect.

CYPRESS.

Cupressus sempervirens,—Evergreen Cypress.

Linnæan class and order, Monœcia Monadelphia.
Natural order, Coniferæ.

Isaiah, xliv. 14. Ecclus. xxiv. 13.; l. 10.

The son of Sirach praises the Cypress for its height and beauty, to which qualities the loveliness of wisdom is first compared, and afterwards the merits of Onias the high priest.

Isaiah, in his scorn of idolaters, numbers up the trees of which a part is burnt, and of the residue

thereof is made a god. Among these ill-applied gifts of the Creator is the Cypress: and the prophet thus confirms the words of the heathen writers, who tell us that the oldest statues were made of Cypress wood. The statue of Jupiter Olympus at Rome, for instance, though many centuries old, was quite sound in the time of Pliny; and the Athenians used the Cypress wood for coffins, in order that the bones of their heroes might have a long duration.

The Egyptians, too, who were careful in such matters, made the coffins of their remarkable men of Cypress wood. Perhaps the timber used for this purpose was that of the horizontal Cypress; a tree less beautiful, but even more durable, than that which tapers into a spire, or, as the Scripture says, "groweth up to the clouds," among the snows of Lebanon. The doors of St. Peter's church at Rome, which lasted undecayed eleven hundred years, until Pope Eugenius IV. replaced them with doors of bronze, were of Cypress.

The ancients loved to make their funeral pyres of the evergreen trees which mostly give out in burning an aromatic odour. The Cypress was favoured among these. Its spiry shape, resembling an ascend-

ing flame, might seem to point to the upward flight of the disembodied spirit. Hence the Cypress was planted by the tomb. Hence it is so even now; for in these matters ancient custom is long retained.

The Turkish burial-grounds at Constantinople are marked by groves of Cypress. They form the public walks, as they shadow and protect the graves, which are often overgrown with flowers. The Persian saints and poets, Hafiz and Sadi, have gardens surrounding their tombs. No pleasure-garden in the East is perfect without its Cypress walk, where the young man dreams of his lover, and repeats the well-known verse of Hafiz, —

> " The Cypress is graceful,
> But thou art more graceful than the Cypress."

So the Cypress seems to hallow the first pleasures of the youth, over the headstone of whose grave, ere many years be past, it shall wave, perhaps the only memorial that he once lived.

FLOWER OF DOVE'S DUNG.

DOVE'S DUNG.

Ornithogalum umbellatum,—Dove's Dung, or Bird's Milk; Common Star of Bethlehem.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, LILIACEÆ.

2 Kings, vi. 25.

THIS elegant little flower, of the lily tribe, is but once mentioned in Scripture, and that by a local and

equivocal name; so that it has seldom been noticed as a vegetable by Bible critics, and the few who do so consider it have taken it for a kind of pulse. The marginal note in the Spanish Bible calls it "a worthless kind of grain like dung, which was given to pigeons." Some of the Rabbins think that it was the contents of the crops of the pigeons, which, having flown beyond the boundaries of the besiegers, came home to Samaria with full crops: but the price of the pigeons themselves, which must have been killed to obtain these crops, is nowhere mentioned. A writer, a follower of Sprengel, contends * that real pigeons' dung is meant; and quotes an abridged chronicle of the history of England, to prove that the siege of Samaria was not the only occasion on which pigeons' dung had been used for food. This chronicle says that, in the famine which laid England waste in 1316, the poor ate *pigeons' dung*. Now the Ornithogalum umbellatum is a native of England, and was commonly eaten in Italy and other southern countries at that period; therefore, it is probable that

* In the 122d No. of the *Edinburgh Christian Instructor*, which number is little, if any thing, more than a copy of the portion of the preface to Sprengel's *Historia Rei Herbaria* which he calls *Flora Biblica*.

the pigeons' dung of the English chronicler is only the Dove's dung of Scripture.

The bulbous root of the ornithogalum has in all times been used as an esculent vegetable, in Syria and the neighbouring countries. Dioscorides says that it was sometimes dried, pulverised, and mixed with bread flour; and that it was also eaten both raw and roasted. He remarks further, that, of thirty-six known species, one bearing a yellow flower yielded the most agreeable food. Laurentius, in his *Essay on bulbous and tuberous Roots*, says that in his time the peasants of Italy and the neighbouring countries often roasted the roots of the ornithogalum, and ate them like chesnuts; or lightly boiled them, and peeled and used them as salad, with oil, vinegar, and pepper. The plains and valleys about Samaria abound in this pretty flower; and the dearth of its roots, during the siege of the city by the Syrians under Benhadad, was a token of famine beyond endurance.

Jehoram, the son of Ahaz, was king of Israel when his capital was surrounded by the Syrian host. He was passing along upon the town wall, when a woman shrieked to him for help: "And he said, If the Lord

help thee not, whence shall I help thee? ..... What aileth thee?" Then follows that tale of horror: *the mothers had devoured their offspring for the famine!* "And it came to pass, when the king had heard the words of the woman, that he rent his clothes; and he passed by upon the wall, and the people looked, and, behold, he had sackcloth within upon his flesh."

Then it was that the fourth part of a cab* of Dove's dung was sold for five pieces of silver! But the misery of the people, and the humiliation of the king, ended soon after, by the miraculous restoration of plenty and peace.

The ornithogalum grows wild in many countries. There are several pretty varieties in Spain and Portugal, but scarcely more agreeable to the sight than our own English star of Bethlehem. I never saw so much of it in any one spot, as in the Campo Santo of Pisa. While I was wondering at the circumstance, I was reminded that the whole of the earth within the enclosure was holy. During the building of that magnificent burial-place, every Pisan

* A cab is a measure equal to three English pints.

ship returning from the Levant brought, as ballast, a portion of the soil of the Holy Land, until there was sufficient to fill the area of the sacred field to a great depth; so that those pious citizens, whose interests or duties prevented their performing a pilgrimage to the holy places during their lives, might still lay their bones in the venerated soil of Palestine.

This accounts naturally for the number of the starry flowers I saw there: and who knows how many of the lovely Eastern blossoms, that now enrich our garden borders, have thus been introduced by the unconscious hands of the pious pilgrim!

EATABLE ROOT.

EBONY.

Diospyros Ebenus, or Diospyrus Melanoxylon,—Ebony.

Linnæan class and order, Polygamia Diœcia.
Natural order, Ebenaceæ.

Ezekiel, xxvii. 15.

True Ebony is a native of the coast of Malabar and of Ceylon, whence it was brought to Tyre, among other precious merchandise from the Eastern isles; of which Ezekiel says, addressing Tyre, "They

brought thee for a present horns of ivory and Ebony." Under the name of present, tribute is often implied by the ancients. Herodotus, in reckoning up the revenue of the ancient Kings of Persia, mentions that the Ethiopians made them a present every three years of various costly articles, among which were twelve tusks of elephants of large size, and two hundred logs of Ebony.

Pausanias speaks of very ancient statues carved of Ebony ; but his account of the wood, on the information of a Cyprian botanist with whom he conversed, might lead us to suppose that his Ebony was found in the ruins of some forest, either buried by a sand-drift or submerged by waters. He says the tree had neither leaf nor flower nor fruit ; that it was dug by the Ethiopians from under ground, where the large black root never sees the sun, and that there were persons skilled in finding the place of its concealment. The black colour of trees long buried is too common to excite wonder ; but that these should pass for true Ebony seems hardly credible.

The Ebony of Ezekiel and of Herodotus is, however, no doubt, true Ebony.

The tree is large; the stem is about nine feet in

circumference, and shoots up, before it branches, to twenty feet in height ; the branches are stiff, irregular, and very numerous. Its fruit is of the size of a small apple, and is often called the date plum. It is yellow and pulpy, and contains eight seeds. The bark, mixed with pepper, is used medicinally by the Hindoos, particularly in dysentery.

The Chinese are exceedingly fond of the fruit of the Diospyros made into a dry sweetmeat, which sometimes finds its way to this country, under the name of date plum.

Pliny speaks not only of the true Ebony of India, but also of another, which, by his slender description, must be the bauhinia, or mountain Ebony, some species of which are said to be found in Crete. This elegant plant furnishes valuable materials for inlaying ; its fine-grained wood being sometimes black, sometimes grey or green.

ELM.

Ulmus campestris, — Common Elm.

Linnæan class and order, PENTANDRIA DIGYNIA.
Natural order, ULMACEÆ.

Hosea, iv. 13.

HOSEA, prophesying against the idolatry of Israel, says, "They burn incense upon the hills, under oaks,

and poplars, and Elms, because the shadow thereof is good." And this is the only time the Elm is mentioned in Scripture.

Some commentators doubt the correctness of the translation: but, as Elms do grow in that part of Palestine where the oak and poplar are also found, namely, in the hilly portion of Hermon, it seems a pity to disturb the usual reading; especially as Celsius is very uncertain about it, and gives it, without pronouncing an opinion, among five versions of the word *Eschel*, which our Bible has elsewhere rendered " thick tree."

The Elm needs no description in England, where it abounds, and contributes much to the beauty of the country.

The timber is fit for water-troughs, pumps, and all machines used in watering the land, as it lasts well, not only when under water, but in alternate dry and wet. It is very tough, but never takes a polish; and in England is universally employed for coffins, owing to its durability in damp situations.

The bark is useful in fevers; and I have seen it gathered in Italy, for the purpose of adulterating the jesuits' bark.

FIG.

Ficus Carica,— Garden Fig.

Linnæan class and order, Polygamia Diœcia.
Natural order, Urticaceæ.

FIG.

Gen. iii. 7.
Numb. xiii. 23.; xx. 5.
Deut. viii. 8.
Judges, ix. 10, 11.
1 Sam. xxv. 18.; xxx. 12.
1 Kings, iv. 25.
2 Kings, xviii. 31.; xx. 7.
1 Chron. xii. 40.
Nehemiah, xiii. 15.
Psalm cv. 33.
Prov. xxvii. 18.
Song of Solomon, ii. 13.
Isa. xxxiv. 4.; xxxvi. 16.; xxxviii. 21.
Jerem. v. 17.; viii. 13.; xxiv. 1, 2, 3, 5. 8.; xxix. 17.
Hosea, ii. 12.; ix. 10.
Joel, i. 7. 12.; ii. 22.
Amos, iv. 9.
Micah, iv. 4.
Nahum, iii. 12.
Habakkuk, iii. 17.
Haggai, ii. 19.
Zech. iii. 10.
St. Matthew, vii. 16.; xxi. 19, 20, 21.; xxiv. 32.
St. Mark, xiii. 28.
St. Luke, vi. 44.; xiii. 6.; xxi. 29.
St. John, i. 48. 50.
Epistle of James, iii. 12.
Revelations, vi. 13

It has been sharply disputed whether the leaves of the common Fig were really those which formed the covering of our first parents, when they became conscious of shame by sin. But the dispute is frivolous, since, whatever leaves they might be, they were gathered from the trees of Paradise, and far beyond our search.

I will therefore proceed to the later history of this favoured plant. Among the fruits brought by the

Israelite spies to their brethren in the Desert, to prove the goodness of the promised land, were Figs. Yet the very next time they are mentioned, it is by the rebellious people, who murmured against Moses for bringing them to the Desert, which "is no land of Figs."

In Deuteronomy, Moses introduces the Fig, when enumerating the riches of their new home, in his farewell exhortation to the people whom he had so long led and governed; and, throughout the Bible, the Fig is generally named as a mark of fruitfulness. In the admirable fable of Jotham the Fig-tree is made to say, "Shall I leave my sweetness and my good fruit?"

Both the texts quoted from Samuel relate to the economical value of the Fig. In the first book of Kings, it is the sign of the prosperous reign of Solomon, that every man dwelt safely under his vine and under his Fig-tree; and, in the second book, Sennacherib, King of Assyria, uses the same metaphor to seduce the Israelites from their allegiance to Hezekiah.*

* Repeated in the thirty-sixth chapter of Isaiah, word for word.

The Psalmist, enumerating the miseries of Egypt, when Pharaoh would not let the children of Israel go, says, "He smote their Fig-trees, and brake the trees of their coasts." The loss of the Figs, which, along with bread, are the chief food of the labourers during some months of the year, being a national calamity of the most cruel kind, though little considered in our cold climate, where fruit, green or dry, is consumed as a luxury, not a necessary of life.

I am tempted to copy several verses of Solomon's Song alluding to the Fig, in this place, for their extreme beauty.

"Rise up, my love, my fair one, and come away.

"For, lo! the winter is past, the rain is over and gone. The flowers appear on the earth: the time of the singing-birds is come, and the voice of the turtle is heard in our land. The Fig-tree putteth forth her green Figs, and the vines, with the tender grapes, give a good smell. Arise, my love, my fair one, and come away."

But Isaiah's strain of the Fig is sublime. "The heavens shall be rolled together as a scroll; and all their host shall fall down, as the leaf falleth from the vine, and as a falling Fig from the Fig-tree."

Throughout the book of Jeremiah, the Fig is used as an emblem of good or evil; and the twenty-fourth chapter is entirely filled with the vision of the good and bad Figs.

The books of the minor prophets are full of allusions to the Fig-tree in the same sense. The passage in Habakkuk relating in part to the Fig-tree is so fine, that I will conclude the notices of the Fig in the Old Testament with it.

"Although the Fig-tree shall not bud, neither shall fruit be in the vines; the labour of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls: yet I will rejoice in the Lord, I will joy in the God of my salvation."

The Evangelists record that Christ himself used the Fig-tree in his discourses as an emblem of goodness. "Do men gather Figs of thistles?" he asks, in order to enforce the necessity of purity of heart to produce good actions. And in St. Luke we find the parable of the hitherto barren Fig-tree, which the master of the vineyard would have destroyed; but the mediator entreated him to spare it, till it should have been dressed and pruned, and time had been given to

show whether it might not yet bear fruit. Such is the merciful intercession of Christ for us!

The destruction of the barren Fig-tree, related by St. Matthew, forms a sequel to this. The tree, dressed and pruned, put forth green leaves, and appeared fair and promising to the passer by. But when the hungry wayfarer approached, the deceit was laid bare. No sweetness, no good fruit was there, and the tree, the emblem of the hypocrite, was blasted by the word of the Lord!

This excellent and nutritious fruit grows naturally on all the shores and islands of the Mediterranean, where it has been cultivated from the very earliest times, spreading southwards to Upper Egypt and Nubia, and to Arabia and Persia eastward.

The Fig-tree requires care and culture in order to bring its fruit to perfection, and to increase its quantity. The prophet Joel, describing the mischievous acts of an invading enemy, says, "He hath barked my Fig-trees;" as if the killing of the Figs was an injury like that of burning the corn.

The ancient and singular art of cultivating the garden Fig is described at some length by Pliny, and in our time it has been detailed curiously by that

eminent botanist Tournefort. It is on seeing such deviations as the Fig-tree presents from the common course of nature, that we are most apt to exclaim: "Lord! how wonderful are thy works! in wisdom hast thou made them all!" And yet the annual growth of the commonest blade of grass, with its curious structure fitted to preserve its kind, is not less indicative of the power, wisdom, and goodness of the Creator, than the fructification of the Fig, or the blossoming of the aloe; hence, therefore, "God never wrought a miracle to convince atheism, because his ordinary works convince it."

Besides the great use of dried Figs as an article of common food in the East, they are used medicinally. Boiled in milk or barley water, they are recommended for coughs and pains in the chest. When heated and split, they are applied to boils and imposthumes with success; a practice as old as the age of Isaiah, who cured King Hezekiah of a dangerous boil by laying on it a lump of Figs.*

The whole plant abounds in a milky juice, sufficiently viscous to have been used by painters as a

* See 2 Kings, xx. 7.; and Isaiah, xxxviii. 21.

vehicle for laying on colour, before the use of oil painting became general.

The Fig thrives well in England. It was brought hither in the time of Henry VIII., who had a French priest for his gardener. The fine Fig-trees at Lambeth are said to have been planted by Cardinal Pole. Our fruit is exceedingly good, but the seed does not ripen thoroughly, so that our young trees are always raised from layers or cuttings.*

The Fig-tree loves to grow by a well or fountain. The most delicious figs I ever ate were from a tree in the Campagna of Rome, whose roots had penetrated far into an ancient aqueduct: and I can never forget the charming shade afforded by a Fig-tree planted by some Spanish visiter, close by a rill of pure water, on the Island of Juan Fernandez; where many a recollection of Europe, and those who dwelt there, arose at the sight of that tree, to pain yet comfort the wanderers of the ocean; for,

> "There is mercy in every place;
> And mercy, encouraging thought,
> Lends even affliction a grace,
> And reconciles man to his lot."

* The net amount of the duty on dried Figs imported in 1841 was 20,728*l.*, at 13*s.* per cwt.

FIR.

Pinus Abies,— Swiss Fir.

Linnæan class and order, Monœcia Diadelphia.
Natural order, Coniferæ.

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2 Sam. vi. 5.
1 Kings, v. 8. 10.; vi. 15. 34.; ix. 11.
2 Kings, xix. 23.
2 Chron. ii. 8.; iii. 5.
Psalm civ. 17.
Song of Solomon, i. 17.
Isaiah, xiv. 8.; xxxvii. 24.; xli. 19.; lv. 13.; lx. 13.
Ezek. xxvii. 5.; xxxi. 8.
Hosea, xiv. 8.
Nahum, ii. 3.
Zech. xi. 2.

The first time the Fir is mentioned in Scripture, it is as a material for making musical instruments: "And

David and all the house of Israel played before the Lord on all manner of instruments made of Fir wood, even on harps, and on psalteries, and on timbrels, and on cornets, and on cymbals." In the books of Kings and Chronicles, and in the Song of Solomon, the Fir is constantly coupled with the cedar, for the building and adorning the Temple of Jerusalem, and the palaces of David and Solomon. Hiram the architect made those doors of it which were to be overlaid with gold ; the Fir being carved, and representing cherubim and palm trees, over which the gold was fitted.

The Psalmist, meditating on the wonderful works of God, says, " As for the stork, the Fir trees are her house;" and this is immediately after the mention of the cedars of Lebanon, wherein the birds have their nests, thus intimating the superior height of the Fir.

In the two first texts quoted from Isaiah, the Fir is again coupled with the cedar, and made to rejoice in the downfall of the wicked in one, and is the subject of vain boasting in the other : but in the three last, — the Fir tree shall grow up in desolate places; " the Fir tree shall spring up instead of the thorn;" and, together with the glory of Lebanon, the Fir tree

shall come to the courts of the everlasting Temple built without hands, the throne of Christ upon earth, —the prophet triumphs in the coming of the Messiah.

How beautifully Hosea paints the repentant sinner as a "green Fir tree;" while Nahum and Zechariah represent the wrath of God as causing the Fir trees to shake, or to howl with fear!

Lebanon is still adorned with Fir trees, mixed with its cedar, its cypress, and its pine, as in the days of the prophets; and they are felled for the builders' and shipwrights' purposes, as of old. Ezekiel says of the ships of Tyre, that the boards were of the Firs of Senir, the masts of cedar of Lebanon, the oars of the oaks of Basan, the rowers' benches of the ivory* from the isles of Chittim; the sails were of the linen of Egypt; and the awnings, indispensable in that climate, of blue and purple, from the isles of Elishah.

Other ancient nations built the solid parts of their ships of oak; witness the oracular beam of the Argo†, and had their masts of Fir, and often the planks and

* Celsius says box-wood, not ivory, as we have seen, p. 59.

† It was cut in the Forest of Dodona, sacred to Jupiter, and of which all the trees spoke oracles.

oars; and it was also a favourite wood for burning with the dead.

The softness and toughness of the Fir timber renders it fit for carving; and, as I have already said, Hiram employed it for that purpose in the doors of the Temple; and the carved prows and sterns of ancient ships of most nations were fashioned of it.

From the time of David to our own, the Fir and its congeners have been employed in making musical instruments; probably because the length and straightness of the fibres allow them to give truer vibrations than those of other trees. Harps and psalteries are particularly mentioned in the Bible. The lutes and guitars of the middle ages, and every kind of fiddle in all times, have had the front or belly at least of some kind of Fir, even when richer and more ornamental woods have been chosen for the backs and sides. Moreover, the sounding boards of pianos are invariably made of Fir.

As the Fir timber is of universal application, so one or other of the numerous species of Fir and pine is found in every country. The inhabitants of the rugged ice-pinnacled mountains of Norway owe what they enjoy of light and heat in their long

winters to the Fir, which frames their houses and supplies fuel and torches; while the inner bark, dried and powdered, supplies one of the materials of their harsh bread. Their stout boats owe no strength to any forests but those of their native Firs and pines; and the red Indian of America enjoys his Fir-built cabin, and a thousand comforts derived from his native woods, as much as the swarthy Norwegian.

Farther south, in both hemispheres, Pines of larger growth present eatable nuts and trunks of wider dimensions, but less durable than the hardy foresters of the north; and the araucaria beautifies the passes of the Chilian Andes, as the green Fir does the heights of Lebanon.

The ancients feigned that Pan, or Universal Nature, and Boreas, the father of the winds, were both enamoured of the virgin Pine; a mere allegorical expression of the fact, that the Fir is found over the whole earth, on high places, exposed to every wind.

FITCHES.

Vicia Sativa,—Fitch or Common Vetch.

Linnæan class and order, DIADELPHIA DODECANDRIA.
Natural order, LEGUMINOSÆ.

FITCHES.

Isaiah, xxviii. 25. 28. Ezekiel, iv. 9.

Isaiah mentions both the sowing and thrashing of Fitches; but some translators, Dr. Lowth among the number, has substituted dill for Fitches, perhaps as being more like the cummin named in the same verses. Sprengel, a better botanical authority, refers one of the grains in the text to fennel flower, a plant equally common, and equally used in the East. No one, however, has disputed the Fitches of Ezekiel's mixed bread.

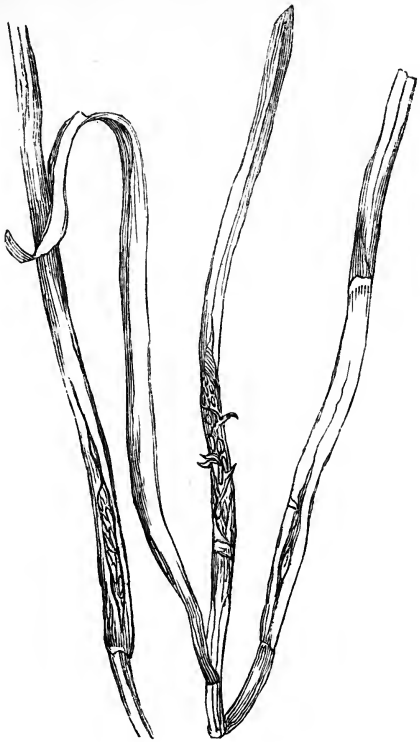
The Fitch is a small coarse kind of pea, hard and not very agreeable, but still furnishing nutritious food; and more than once in England, during times of famine or scarcity, wild Fitches have preserved thousands of poor people from starving, particularly, according to Turner, in the great famine of 1555.

With us they are cultivated chiefly as green fodder for cattle, but in some countries Fitches form an important part of the labourer's food.

The Fitch is found wild in every country, from

England to Bengal; and, from its beauty, deserves a place in the flower-garden. Pigeons are extremely fond of it, and perhaps it was cultivated in Jewry for their use.

The middle and lower classes of Jews were permitted by the law to redeem their first-born with a pair of doves, while a lamb was required from the rich. These beautiful birds were therefore bred in great numbers; and Fitches, being their food, must have been an object of some importance in the husbandry of Jewry.



FLAGS.

Zostera Marina,— Water-weed, Flags, Sea Wrack.

Linnæan class and order, MONANDRIA DIGYNIA.
Natural order, FLUVIALES.

FLAGS.

Exodus, ii. 3. 5. Job, viii. 11. Isaiah, xix. 6.

In addition to these texts, where *Flags* are named in our Bible, we might add, according to Celsius,

Exod. xiii. 18.; xv. 4.
Numb. xiv. 25.; xxi. 4.
Judges, xi. 16.
1 Kings, ix. 26.
Psalm cvi. 7. 9. 22.; cxxxvi. 13. 15.
Jer. xlix. 21.
Jonah, ii. 5.

Two different Hebrew words have been rendered Flags by our translators, so that there are reasonable grounds for a difference of opinion among commentators concerning the true Flags intended.

The word rendered Flags in the book of Job is given as meadow in the forty-first chapter of Genesis*; and sedge, or long water-grass, in Ecclesiasticus, xl. 16. The other word, rendered Flags in the second of Exodus and the nineteenth of Isaiah, is the same with the weeds of the prophet Jonah.†

Our want of accurate knowledge concerning the plants that grow on the borders of the Nile, and form what one of the Oriental travellers calls an "arundinaceous thicket" on its shores, precludes the

* Second and eighteenth verses. † Jonah, ii. 5.

possibility of even a tolerable conjecture concerning the Flags among which Moses was laid. It might possibly be in a water meadow near the river, where his sister could better watch and guard him, than if exposed in the stream itself; in which case our translators probably had in view the common sedge, or water iris, usually called Flags in England.

Some writers think that the prophet Isaiah alludes to the lotus in the following sadly beautiful picture of desolation: "And the brooks of defence shall be emptied and dried up, the reeds and the Flags shall wither." Yet, on the whole, Celsius is inclined to interpret this and other passages, alga, or water-weed; because the word *Suph*, which our interpreters render Flags in one text of Exodus and in one of Isaiah, is rendered weeds in the prophet Jonah: "The depth closed me round about, the weeds were wrapped about my head." And in twelve other passages *Suph* is translated the Red Sea.

Some interpreters suppose that *Yam Suph*, Red Sea, designates the colour of that gulf, whether derived from coral or weeds; others maintain that it signifies only Weedy Sea, and such it must be if the interpretation of Jonah be correct.

Now the common weed of the coast, where Jonah was cast into the sea, and one which may be found in the waters of the Nile, is the Zostera Marina; and I have ventured to place it at the head of this chapter, as the best representative of the Flag or weed of Scripture. It is rather a smaller weed than the Zostera Oceanica, but differs from it in little else. The riband-like leaves of both, when first thrown ashore, are eaten greedily by horses and swine: in Holland, and some other countries, they are used for manure; and with us, on the east coast, for many purposes.

The immense balls of the zostera, thrown up by the tides, are used in forming sea-barriers and dikes; and the less tangled leaves make admirable stuffing for mattresses and cushions, as they repel all vermin. They are used for the same purposes in the Levant, and the twisted rush-like covers of the Florence flasks are formed of the zostera.

As it is found chiefly in the shallows near the shores, in marshes and ditches, whether of the sea or of great rivers, Isaiah's text, prophesying the withering of the Flags when the brooks of defence are dried up, doubtless refers to Celsius's water-weeds, and answers to none of these so well as to the zostera; and, per-

haps, the Flags among which Moses was laid were the long leaves of the common water weed or zostera of the marshes, notwithstanding the variety in the original word and in our translation.

FLAX.

Linum Usitatissimum,— Common Flax.

Linnæan class and order, PENTANDRIA PENTAGYNIA.
Natural order, LINEÆ.

FLAX.

Exod. ix. 31.
Joshua, ii. 6.
Judges, xv. 14.
Prov. xxxi. 13.
Isaiah, xix. 9.; xlii. 3.
Ezekiel, xl. 3.
Hosea, ii. 5. 9.
Matthew, xii. 20.

This very elegant and most useful plant is found wild in England, and in most countries in Europe. It spreads eastward as far as China, and the earliest writings, sacred and profane, mention that it had been cultivated in Egypt from times beyond the knowledge of man. We first find Flax in our Bible as connected with the miracles wrought for the deliverance of Israel from the house of bondage. The hailstones destroyed the Flax, for it was bolled, and the barley which was in the ear; which fixes the time for the Flax-gathering in Egypt to the early part of the month of April, a time of year when hailstones would have been portentous in the South of Europe — how much more in Egypt!

The linen cloth, which, it appears from several passages of Leviticus and Deuteronomy, the Israelites possessed in abundance during their forty years'

wandering in the wilderness, was either part of the spoil which they carried up out of Egypt, or purchased, as occasion served, from those caravans of travelling merchants, known to the early patriarchs as Ishmaelites, because they appear not to have sojourned at any of their stations long enough to have sown and stored their Flax. Accordingly, there is no mention of the plant Flax during the whole history of the wandering in the wilderness. But as soon as they touched the borders of the promised land, and Joshua sent his spies to reconnoitre it, we find Rahab hiding those spies under the stalks of the Flax which she had laid to dry on the house-top.

Flax therefore was known and cultivated in Palestine before the exode, a fact indeed to be inferred from the familiar mention of it in the history of Samson.

The mode of spinning Flax by the spindle and the distaff, spoken of by Solomon in his Proverbs, and beautifully portrayed to us in the marbles of Athens and of Rome, endured even to our days. I have seen the rock or distaff formed simply of the leading shoot of some young tree carefully peeled, it might be birch or alder, and, farther north, of fir or pine; and the spindle formed of the stem of the beautiful shrub

euonymus, or spindle-tree. This primitive mode of spinning first gave way to the spinning-wheel, before it finally disappeared on the invention of more complicated machinery, though the spinning-wheel is far from obsolete.

In Isaiah's denunciation of woe to Egypt, the workers of fine Flax are numbered among the foredoomed sufferers, that is, those who manufactured the fine linen, which was long one of the staple exports of that rich country.

In another prophecy, describing the meekness and gentleness of the coming Messiah, he says: "He shall not strive nor cry, neither shall any man hear his voice in the streets. A bruised reed shall he not break, and smoking Flax shall he not quench, till he send forth judgment unto victory." This text is quoted by St. Matthew in the only passage where Flax is mentioned in the New Testament.

Ezekiel, in his vision, speaks of a measuring line, or cord, of Flax; and Hosea alludes to the household uses of Flax. Solomon says of the virtuous woman: "She seeketh wool and Flax, and worketh willingly with her hands. . . . She layeth her hands to the spindle, and her hands hold the distaff."

Linen cloth is frequently named both in the Old and New Testaments; and we may conjecture, from the quantity mentioned in those chapters of Exodus which describe the framing of the tabernacle and the clothing of the priests, that it formed the common clothing of many of the congregation.

Linen also occurs more than once in the chapters of Leviticus and Deuteronomy which treat of sumptuary laws; and later we find Solomon trading to Egypt for fine linen, for his own use, and that of the Temple.

Although much linen was spun and woven in Palestine and the adjacent countries, and much in Greece and Italy, the ancients seem universally to have preferred the fine linen of Egypt, where the priests were clad in the purest white as a part of their religion.

But when we speak of the fine linen of Egypt, we must not suppose it was any thing like that of Holland or Ireland. It was, in fact, more like a thin dowlas, the threads being beautifully even and well wove, as may be observed in the swathings of the Egyptian mummies. It is curious that Egypt should have exported linen yarn for the manufactures of

other countries, yet it was among the articles brought into Palestine by Solomon for the use of his people.*

The prophet Ezekiel says that the ships of Tyre had their sails of the fine linen of Egypt †, and that the awnings were also of purple and blue linen, whilst at that period, and long after it, the common vessels of the Mediterranean had their sails of matting.

Sylla's mosaic pavement, in the Temple of Fortune at Prænestе, exhibits vessels with sails of matting; and in the 14th century, Taddeo Gaddi, the Florentine painter, who probably copied what he saw, has given sails of matting to the ships in which the saints, whose lives form the subject of his pictures, performed their voyages.

But the Tyrians, luxurious as they were, did not use linen sails only because they were costly. Their ships, it is well known, made their way into the far Atlantic; and, as their pilots were also their wise men ‡, they resorted, of course, to a firmer material

* 1 Kings, x. 28.

† The model ship, which was carried in procession at Athens during the Panathenaic festival, had its sail originally from Sais in Egypt, though it was afterwards woven and embroidered by certain women of Athens, and annually renewed.

‡ Ezekiel, xxvii. 8.

than matting, for the sails that were to fetch their tin and their iron from the shores of Britain; and the linen of Egypt was the best, and most easily procured.

The use of fine linen in the Temple, and for the priests' clothing, was part of the strict ceremonial of the Jewish worship. When Hannah presented young Samuel to the high priest Eli, to stand before the Lord, she clothed him in a linen ephod; and when David brought up the ark of the covenant in triumph from the house of Obed-edom unto his own city, he performed his religious dance before the ark, girt in a linen ephod: in both instances, the persons engaged in solemn acts conforming to the custom of the priests and Levites of the tabernacle, afterwards continued in the Temple.

Linen cloth and fine linen are several times named in the New Testament. The rich man, at whose gate Lazarus was laid, was clothed in purple and fine linen. Linen was used to enwrap the infant's tender limbs, and in linen the bodies of the dead were swathed.

The last occasion on which linen is mentioned in the Gospel is this, the most important on which the work of man's hands could be employed: "Then took they the body of Jesus, and wound it in linen

clothes with the spices, as the manner of the Jews is to bury."*

"Then cometh Simon Peter following him, and went into the sepulchre, and seeth the linen clothes lie, and the napkin that was about his head, not lying with the linen clothes, but wrapped together in a place by itself. Then went in also that other disciple, which came first to the sepulchre, and he saw, and believed."†

* St. John, xix. 40.

† St. John, xx. 6, 7, 8. See, also, all the other evangelists, in their account of the burial and resurrection of Christ.

FRANKINCENSE.

Boswellia Thurifera, also Boswellia Glabra,—Frankincense.

Linnæan class and order, DECANDRIA MONOGYNIA.
Natural order, TEREBINTACEÆ.

Exod. xxx. 134.
Levit. ii. 1, 2.; xxiv. 7.
Numb. v. 15.
Nehemiah, xiii. 5.
Song of Solomon, iii. 6.; iv. 6. 14.
St. Matthew, ii. 11.
Rev. viii. 3, 4.

THE perfume which Moses was commanded to prepare for the use of the ark of the covenant consisted of equal weight of Frankincense, stacte, onycha, and

galbanum. The making it for any secular purpose was to be most severely punished.

In Leviticus we find that the burnt-offering was to be strewed with Frankincense, and the same fragrant substance was to be sprinkled over the shew-bread in the tabernacle; but in Numbers the offering for jealousy is forbidden to be perfumed with Frankincense.

Nehemiah mentions Frankincense among the necessaries furnished to the Levites, when they re-established the ritual of the law, after the building of the second Temple of Jerusalem; and, in the Song of Solomon, he first speaks of the perfume of myrrh and Frankincense and all the powders of the merchant, and afterwards numbers it up among precious trees and principal spices.

St. Matthew tells us that Frankincense was among the offerings made to the infant Christ, when

> "Three kings,
> Or, what is more, three wise men, went
> Westward, to find the world's true Orient."

In the Apocalypse, St. John sees that the angel who burns incense before the elect has much Frankincense in his censer.

Such is the honour in which Frankincense is held in Scripture. But it is probable that the fine Frankincense of the Bible was really olibanum, a gum exuding naturally from the tree or trees that produce Frankincense, while the proper Frankincense flows from wounds made in the bark of the tree, for the purpose of procuring this incense.

Till of late years, the tree or trees producing olibanum and Frankincense were unknown; but the researches of Mr. Colebrook, Drs. Roxburgh, Wallich, and other Indian botanists, have discovered them in the Boswellia Thurifera or Serrata and Boswellia Glabra; the latter of which may perhaps be found in Persia or Arabia. But the olibanum and Frankincense of commerce are produced from these trees in Central India, and Bombay is the port whence the greatest quantity is exported.

This drug is still constantly burnt as incense in the Hindoo temples, under the names of Rhoonda and Looban; the latter is certainly the Lybanus of Dioscorides*; and this coincidence of the ancient names

* Some have fancied that this Lybanos of the Greek was derived from Lebanon, and that once on a time Frankincense grew wild on Mount Lebanon.

with that of the modern natives, corroborates the other evidence insisted on by the Indian naturalists, as to the identity of the incense-bearing trees with the boswellia.

GALBANUM.

Bubon Galbanum,— Galbanum Gum.

Linnæan class and order, PENTANDRIA DIGYNIA.
Natural order, UMBELLIFERÆ.

GALBANUM.

Exod. xxx. 34.

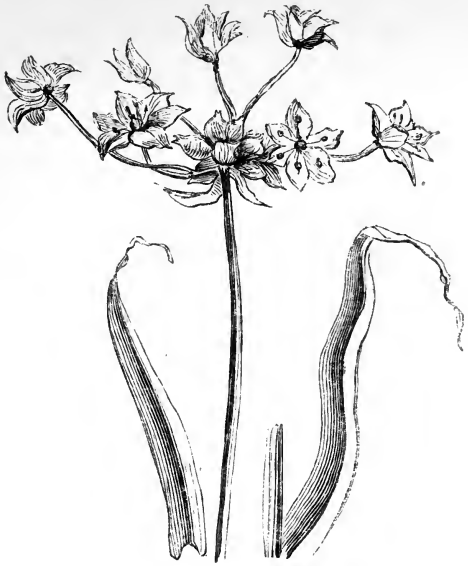
Galbanum is mentioned but once in the Bible, and then it is along with onycha, frankincense, and stacte, as a component part of the incense for the most holy altar.

Gum Galbanum exudes from the stalks and branches of the plant, and much resembles Asafœtida in its medicinal qualities, and a good deal also in smell, though it is by no means so offensive. Hence it is often preferred, as a remedy, for persons of delicate habits.

It may appear singular, that a gum having such a scent should have been mingled in the holy perfume, but the Eastern nations are far from agreeing with us on the subjects of agreeable smells; and, after all, mingled with the other ingredients burnt on the altar of perfumes, it may have assisted, in no small degree, to keep down the disgusting effluvium arising from the constant shedding of blood in the Jewish sacrifices.

In India, asafœtida itself is chewed as a luxury; and I well remember what it cost me to swallow almonds and raisins sprinkled with that nauseous drug, when, being on a visit to the temple of the Mahadeo of Chimchore *, the priests presented them to me in return for certain rupees which were the price of my admittance.

* In the Mahratta country, the Mahadeo was a pretended incarnation of the Hindoo God of Wisdom Ganesa, in the person of a weakly boy, twelve years old.



GARLIC.

Allium Ascalonicum,— Common Garlic.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, LILIACEÆ.

Numb. xi. 5.

GARLIC is only once named in Scripture, and that is along with other vegetables, by the ungrateful Israelites, when they reproached Moses for leading them up out of Egypt, where they enjoyed luxuries which the

desert they had to pass through in their way to the land of promise did not afford.

The Israelites had been employed by the Pharaohs of Egypt on public works, and had doubtless been fed as other workmen were. Now Herodotus gives an account of the great sums spent on the provisions of the labourers employed in building the pyramids; and among the articles of food which he enumerates, Garlick, leeks, onions, and radishes form a very considerable portion. The Jewish brick-makers naturally regretted the savoury roots they had left behind. Perhaps the Garlic of Egypt was of the delicate kind called eschalot, brought to the West of Europe by the Crusaders, who named it after Askalon, in Palestine, where they found it.

There are various kinds of Garlic, some of which have very elegant flowers. The root of our English Garlic is not worth cultivating; indeed, it is a troublesome weed in the meadows, because, as the leaves shoot up early in the spring, cows often eat it, and their milk in consequence acquires a very disagreeable taste: but the Garlic of Escalon is an indispensable condiment in modern cookery.

GOPHER WOOD.

Gen. vi. 14.

THERE is but this one mention of Gopher wood in the Bible, nor is there any thing that can be imagined to be the same in any ancient profane author, nor any similar name in other tongues, to give a clue to the discovery of the real Gopher. Accordingly, the Bible critics have been busy.

Bochart and Fuller will have cypress to be Gopher wood, because of its durability. Asenarius, Munster, Tailor, and others, choose the fir, because it overflows with inflammable matter, and they say that in Hebrew Gopher means sulphur; whereupon Parkhurst sensibly remarks that Gopher probably means any and all trees yielding pitch or resin, thus including the cedar, and in this he agrees with Sir Walter Raleigh.

Now the ark was pitched within and without; so some suppose that it was made of wicker-work, and daubed over with asphaltum within and without.

These are all useless conjectures, as well as a

hundred others that might be named. Noah dwelt where the pine and fir and cedar and oak were all at hand; and, directed by the spirit of God, no doubt he made the best choice of wood, and wrought it with skill and with zeal to do the bidding of his God.

GOURD.

Cucumis Prophetarum,— Colocynth, or Bitter Gourd.

Linnæan class and order, Monœcia Syngenesia.
Natural order, Cucurbitaceæ.

2 Kings, iv. 39. Jonah, iv. 6, 7. 9, 10.

The words translated Gourd in the texts named above are very different, and are, by good commentators, said to mean very different plants.

During a famine in the time of the prophet Elisha, an assembly or college of the sons of the prophets, as the students of the law were called, was with Elisha

as their instructor; and he ordered his servant to seethe pottage for them. "And one went into the field to gather herbs, and found a wild vine, and gathered thereof wild Gourds his lap full, and came and shred them into the pot of pottage, for they knew them not. So they poured out for the men to eat. And it came to pass, as they were eating of the pottage, that they cried out and said, Oh thou man of God! there is death in the pot."

Now this description, and the intolerably bitter taste (which the prophet only cured by miracle), point out with tolerable certainty the Prophet's Gourd, or Cucumis Prophetarum, a plant common in Palestine, intolerably bitter, and even poisonous. An extract is however prepared from it, called colocynth, or coloquintida, which is one of our commonest and most valuable drastic medicines.

The Gourd of Jonah does not appear to have been any of the Cucurbitaceous plants. The Arab version of the Scriptures, and the best informed European commentators, agree that the plant so quickly growing and so quickly dying was the Ricinus communis, which we call Palma Christi, or castor-oil nut.

Ricinus communis,—Palma Christi.

Linnæan class and order, Monœcia Monadelphia.
Natural order, Euphorbiaceæ.

The dispute concerning Jonah's Gourd began so early as the time of St. Jerome and Rufinus of Aquila. One maintaining that the plant was ivy, the other excommunicated him, and the saint of ivy

returned the compliment. Many other extravagances were acted by them for this insignificant cause, and, strange to say, a large portion of the Christian world joined in the squabble.

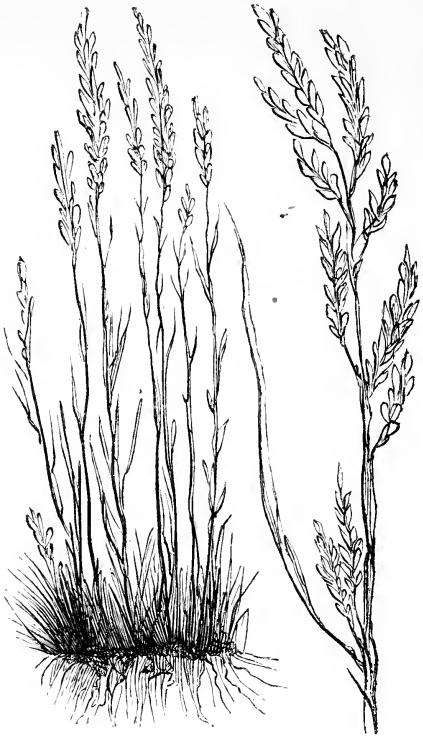
But the ancient name*, not unlike that now given to the plant in the East, the situation in a place where the Ricinus reaches its full perfection, the delicious shade afforded by its broad tender leaves, and its liability to sudden decay, all agree in pointing it out as the object of the prophet's care, and of his regret.

But the certainty or doubt as to the particular plant that shadowed Jonah is of no consequence, compared with the beautiful and touching lesson conveyed in the two last verses.

"Then said the Lord, Thou hast had pity on the Gourd, for the which thou hast not laboured, neither madest it grow; which came up in a night, and perished in a night: and should not I spare Nineveh,

* In Hebrew Kikajon, called by Pliny Cici or Kiki. It is singular that the oil expressed from the seeds of the cici should have been used by the ancients, including the Jews, as one of the pleasantest oils for burning, and for several domestic uses; though I cannot find that its medicinal virtues were known. The modern Jews of London use this oil by the name of oil of kik for their Sabbath lamps, it being one of the five kinds of oil their traditions allow them to burn on such occasions.

that great city, wherein are more than six score thousand persons, that cannot discern between their right hand and their left hand, and also much cattle?"



GRASS.

Festuca fluitans, Glyceria fluitans,— Sheep's Fescue, Flote Fescue.

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINEÆ.

GRASS.

Gen. i. 11, 12.
Psalms, xxxvii. 2.; xc. 5.; xcii. 7.; cii. 4. 11.; cxix. 6.
Isaiah, xxxvii. 27.; xl. 6, 7, 8.
Daniel, iv. 23. 32, 33.
Amos, vii. 1, 2.
St. Matthew, vi. 30.; xiv. 19.
St. John, vi. 10.
Epistle of James, i. 10, 11.
1 Epistle of Peter, i. 24.
Revelations, vii. 7.; ix. 4.

In the sublime description of the creation that opens the book of Genesis, it is said that on the third day the earth brought forth Grass, and herb yielding seed; and these, notwithstanding a common habit of regarding them as nearly of the same import, are really carefully distinguished in the venerable language of the original.

It was an ancient opinion, that the short-tufted Grass that forms our greenswards produced neither flower nor seed, but sprung, as Theophrastus says, spontaneously from the soil, to be the food of beasts; whereas the herbs yielding seed were potherbs available for man.

Time, of course, discovered that Grass, like other things of vegetable growth, produced its flower and seed; and some of the more useful kinds appear to be spread over every country, and through every climate.

As far as I have read, however, Hasselquist appears to be the only traveller who has noticed the Grass of Palestine. He mentions fescue-grass more than once; and speaks of the great abundance of sheep's fescue in a particular situation, as indicative of the fitness of the hilly land for the pasture of numerous flocks.

Other travellers have told us of the abundance of sheep's fescue in the more northern parts of Asia; and represent the herdsmen Tartars as moving with their flocks in pursuit of it, through their wide-spreading steppes. Royle* enumerates the common Grasses of Europe which spread into Asia, wherever there is soil, in the north, for pasturage. He speaks of the fox-tail, cat's-tail, meadow-grass, fescue, cock's-foot, oat-grass, and bromus, besides some others which he does not name, as being like those of Europe, of the very best quality. He mentions lemon-grass, Andropogon Schœnanthus, which he takes for the Schœnus of Dioscorides, as common in Middle India, while the others are mostly confined to the northern and mountainous districts. In truth, sweet Grass of some kind is found in all the temperate regions of the globe.

* Botany, &c., of the Himalaya Mountains.

Such as is found between the tropics is larger and harsher, and makes but a poor clothing for the surface of the earth; while that which approaches the polar climates dwindles gradually, and finally makes way for the lichens and mosses.

Throughout the book of Psalms, the prosperity of the unrighteous man is compared with "the Grass which is cut down and withereth;" or that "which withereth ere the mower can fill his hand with it, or he who bindeth the sheaves his bosom;" or the "Grass that withereth on the house-top."

The same image, drawn from the ephemeral appearance of Grass, occurs in the thirty-seventh chapter of Isaiah: but, in the forty-fourth, the prophet says, comforting fallen Israel, that "the redeemed seed of the house of Jacob, having the Spirit of the Lord poured upon it, shall spring up as among the Grass;" alluding to the quick and rich growth of Grass in the spring. Isaiah afterwards compares the fate of the enemies of Hezekiah to the Grass of the field, or upon the house-tops, or corn blighted before it be grown up.

Several of these passages evidently allude to the custom of cutting and drying Grass as hay, for store

fodder; but there is also a practice which prevails in hot climates, which may be referred to. Persons are sent out into the woods and other wild places to collect the Grass, which would otherwise be wasted; and it is no uncommon thing in the evening to see groups of grass-cutters in the market, waiting to dispose of their bundles or sheaves, which are often so large, that one is disposed to wonder how they could have been conveyed from the woods upon one man's shoulders.

Sir Thomas Brown quotes Columella and Varro as authorities for the ancient practice of cutting Grass for hay. The method, according to him, was nearly that we now follow in England; and the antique farmers had also their first and second crops. Columella mentions that, even when the Grass was cut and turned till dry, it was unlawful to gather it together, or bind it, on the festivals dedicated to the greater heathen deities.

By the text quoted above from the prophet Amos, it appears that there were likewise two crops of hay in Palestine. The prophet dates the judgement of the grasshoppers from "the beginning of the shooting up of the latter growth after the king's mowings."

The first time Grass is mentioned in the New Tes-

tament, it is as the general name for the vegetable clothing of the earth. "Consider the lilies of the field, how they grow; they toil not, neither do they spin: and yet I say unto you, that even Solomon in all his glory was not arrayed like one of these. Wherefore, if God so clothe the Grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, oh ye of little faith."* Again, we are told that the multitude that was fed with five loaves and a few small fishes sat down upon the Grass, and that "there was much Grass in that place."

In the Apocalypse, also, Grass is considered as the mere clothing of the earth, a third part of which perished when the first blast of the destroying angel was heard.

St. James and St. Peter, in their epistles to the general body of Christians, use the following beautiful metaphor with but little variation. "All flesh is as Grass, and all the glory of man as the flower of Grass: the Grass withereth, and the flower thereof fadeth away; but the word of the Lord endureth for ever."

* Sermon on the Mount.

From these examples we perceive that any species of Grass, growing in the country, may have been intended by the authors of the various books I have quoted. The summer Grass

> " That fastest grows by night,
> Unseen yet crescive in his faculty,"

may belong to the latter growth, after the mowings; and of all the rest it may be said, they are equally likely to have furnished the imagery of the sacred writers. The fescue-grasses, as I have already said, are certainly natives of the Holy Land. One remarkable species, Glyceria fluitans*, produces such abundance of sweet seeds, that they are exported from the Syrian coast, and sold in Turkey, Hungary, and the South of Germany, under the name of sweet manna seeds, for the table, where they are presented in the forms of soups, puddings, and confections of various kinds.

This glyceria would scarcely thrive on a dry sheep-walk, but it is an admirable Grass for the meadow, whether for fresh food for cattle or for hay.

The sheep's fescue, on the contrary, prefers the dry

* So named by Mr. Robert Brown, on account of its sweetness: it is often called flote fescue.

and often parched sheep-walk. Its tufted leaves are fine as threads, and its little flower peculiarly delicate. Perhaps it may be the small Grass upon the house-top; yielding no profit except in the dry pastures, where it may be detected, even at a distance, by the pretty fescue moth, which in spring is for ever hovering over it.

HASEL.

Corylus Avelanus, — Hasel Nut.

Linnæan class and order, Monœcia Polyandria.
Natural order, Corylaceæ.

HASEL.

Gen. xxx. 37.

The Hasel wands that Jacob used in his crafty management of Laban's flocks are noticed in the only text of Scripture in which Hasel itself is specified, although nuts are repeatedly spoken of. The Hasel and filbert, the walnut, pistacea, and almond, are alike indigenous in Palestine; and though they are nowhere, like the chesnut, the dried fig, or the raisin, principal articles of food, yet they are more frequently used in diet than with us, and enter pretty largely into the composition of many Eastern dishes. The lamb stuffed with pistacea nuts, which we read of in the Arabian tales, is still one of the luxuries of the Arab camp, and pistaceas or almonds are strewed over the most savoury pillaws.

Nuts were much used as food in ancient Italy; indeed, the people of Præneste, the modern Palestrina, received from the Romans the nickname of nut-eaters, which their descendants to this day inherit. Some

imagine that this name had its origin in the plenty and excellence of the nuts in the Prænestine territory, but Ceccone* gives from Livy a more honourable derivation. He says that, when Hannibal besieged Casselino, the Prænestines, who formed the garrison, were reduced to the extreme of famine. Gracchus had vainly attempted to relieve them by causing barrels of corn to be set afloat in the river, so that the soldiers might draw them ashore. But the enemy soon discovered and put an end to this supply. It was the nut season, and an immense number of nuts were thrown into the water; which floating singly reached the famishing garrison, and being caught by the soldiers in cloths and fine nets, enabled them to hold out.

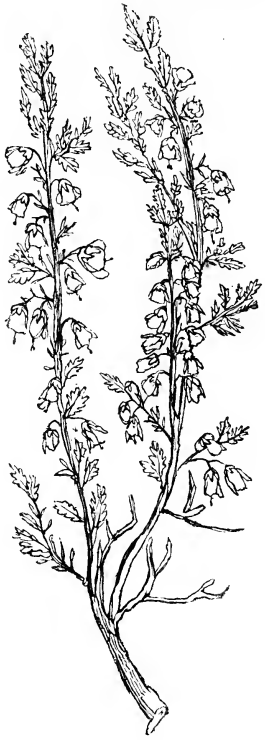
Delicious confections of nuts, honey, and wheaten flour, are common to Italy, Turkey, and the countries bordering the Levant.

A great profit is made in Syria and Palestine of the oil of the Hasel-nut, as well as the walnut. Both are eaten when fresh, and are much used in the East for the lamp. The greater part produced there is,

* In his *Historia di Palestrina.*

however, consumed by the soap-makers of the Syrian ports, whence there is a great yearly exportation of soap.*

* The amount of duty paid in England in 1841 was 8,628*l.*, at 2*s.* per bushel, for Hasel and filberts only, brought in for the table or the oil-mill.



HEATH.

Erica vulgaris,— Common Heath, Heather, or Ling.

Linnæan class and order, OCTANDRIA MONOGYNIA.
Natural order, ERICEÆ.

HEATH.

Jerem. xvii. 6.; xlviii. 6.

THE prophet speaks figuratively of Heath in both these passages, which imply the loneliness of the Desert.*

Heath of several species and varieties is found covering large tracts of country in Europe, Asia, and Africa. Our own islands possess several indigenous species, but that most widely spread is the Heather, or Ling.

Hasselquist visited the Holy Land as a botanist; as Linnæus tells us in his interesting account of him, from an enthusiastic desire to make the botanical treasures of the sacred places known as well as those of other countries that have not half the claim to our attention.

Celsius says the Heather is the Heath of Jeremiah, and Hasselquist found it growing abundantly in the

* In the first text the Hebrew word is *Accobita*, which Celsius says is Heath, Heather, or Ling, in English and Swedish. In the second text the original word is *Arar*, which may be either tamarix or juniper.

vale of Jericho; and, according to the account of recent travellers, the neighbourhood of Joppa is so covered with it, that it is annually burnt for ashes for the soap-makers.

But pearl-ash is not the only profit drawn from Heath. The land is still one of milk and honey, and few plants yield so much to "Nature's alchemist, the busy bustling bee," as Heather. The Scotch Heather honey, though dark in colour, is delicious in flavour; and every Eastern traveller can tell how the Arab dips his fresh flour cake into the mingled cup of honey and butter, and needs no better sustenance in crossing the Desert.

HEMLOCK.

Conium maculatum,— Spotted Hemlock.

Linnæan class and order, PENTANDRIA DIGYNIA.
Natural order, UMBELLIFERÆ.

Hosea, x. 4. Amos, vi. 12.

THESE are the only two texts in our translation of the Bible where the name of Hemlock occurs. But the

same Hebrew word is rendered gall in the following passages: Deut. xxix. 18., xxxii. 32.; Psalm lxix. 21.; Jer. viii. 14., ix. 15., xxxiii. 15.; Sam. iii. 5. 9. There is no question but that some bitter weed is meant in all these places. In the three first it is coupled with wormwood; and the prophet Jeremiah expresses the last degree of punishment, the greatest evil to be brought upon sin, as drinking the water of gall.

In Hosea, the false swearer is said to cause judgement to spring up "like Hemlock in the furrows;" that is to say, that false judgement is as mischievous, from its semblance to justice, as the poisonous Hemlock is, by its resemblance to the wholesome dill or anise, in the furrows of which it springs, and may deceive the husbandman.

Amos expresses nearly the same thing more briefly. The wicked "have turned righteousness into Hemlock."

The use of Hemlock, as a means of putting criminals to death, is very ancient. In some cases, probably, the Cicuta virosa, which is a more active poison, was substituted for it. Of the juice of one or other of these noxious weeds, that bowl was

composed which put an end to the life of Socrates; a bitter draught,—but he comforted himself that his SOUL COULD NOT DIE, and patiently submitted to the death of his body.

If he, a heathen, could attain to so excellent a doctrine by the right use of his reason, or that sage philosophy,

> "From Heav'n descended to the low-roof'd house
> Of Socrates,"

as to gild the stormy sunset of his own life, and enable him to cheer the spirits of his mourning followers with the hope of a happy immortality, how much more should we, who are blessed with the direct promise of Eternity, hope and believe likewise!

The Jews made a different use of their Hemlock or gall-weed. They availed themselves of its benumbing powers, to deaden the pangs of the dying criminal. To such as were condemned to be stoned, they gave a cup of wine, with a grain of myrrh and a portion of Hemlock juice mingled in it, to strengthen their nerves as they walked to the place of execution, and dull the sense of their death pains. Hence, the expression in Proverbs*, "Give strong drink to him

* Proverbs, xxxi. 6.

who is ready to perish, and wine to him who is bitter of soul."

This practice of the Jews explains the relations of the evangelists, who say that, while Jesus was on the cross, they gave him vinegar mixed with gall, or wine mingled with myrrh, upon a sponge, to moisten his lips. Now the common ration wine of the soldiers was almost as poor and sour as the vinegar with which the Jewish labourers were wont to refresh themselves*, and some of the by-standers, we trust in compassion, mingled with this wine gall or myrrh, perhaps both, and put it upon a sponge to his lips, thinking to soothe his agony. He tasted and put it aside. Not because of the bitterness of the draught, but that in his body he would bear the whole bitterness of the punishment for sin, and win the salvation of mankind by a worthy sacrifice, full, and conscious, and knowing of the price he paid.

* Ruth, ii. 14. Boaz desires that Ruth may dip her morsel in the vinegar at meal-time, and she sat beside the reapers and ate.

HOLM.

Quercus Cerris, — Holm Oak.

Linnæan class and order, MONŒCIA POLYANDRIA.
Natural order, QUERCINÆ.

HOLM.

Susannah, verse 58.

I WAS for some time doubtful what tree is the Holm of our version of the Bible. But I find that Gerard gives that name to the rough-acorned oak, which some call Turkish oak now-a-days; and that Dr. Phineas Holland, in his translation of Pliny's *Natural History*, says decidedly, b. xxiv. c. 4., that the great Holm Oak is the Quercus Cerris; and, in b. xvi. c. 6., he says of the fruit of the Quercus Cerris, "clad it is with a cup beset with sharp prickles;" which answers, not only to Gerard's description and cut, but to the specimen brought to me by a countryman as the Holm Oak, and which I have drawn from the branch itself.*

Now, as our authorised version was published very

* Another rough-acorned Oak, the Velame or Quercus Ægilops, is of great importance in commerce: the acorns are very large; I possess one of the cupules, above an inch in diameter. The fruit, especially when just formed, contains a great proportion of tannin, and is imported for our tanners in great quantities: at the rate of 1*s.* per cwt., the duty amounted in 1841 to 8,260*l.*

little after Holland's translation and the *Great Herbal*, it seems next to certain that, in our version of the story of Susannah, the word rendered Holm is really the Quercus Cerris. It is a native of Asia Minor, Syria, Palestine, the hilly parts of Persia, and onwards to Cabool, if not beyond; therefore it might well be one of the ornaments of Susannah's garden, where it would find few rivals in the stateliness of its growth, or the beauty of its foliage.

HYSSOP.

Hyssopus officinalis, — Common Hyssop.

Linnæan class and order, DIDYNAMIA GYMNOSPERMIA.
Natural order, LABIATÆ.

HYSSOP.

Exodus, xii. 22.	1 Kings, iv. 33.
Leviticus, xiv. 4. 6. 49. 51, 52.	Psalm li. 7.
Numbers, xix. 6. 18.	St. John, xix. 29.
	Hebrews, ix. 19.

SPRENGEL, in that part of the introduction to his *History of Plants* which he calls *Flora Biblica*, makes no doubt that Solomon's Hyssop was Thymbia spicata, found by Hasselquist growing on rocks, and among the ruins about Jerusalem. And this certainly suits with Solomon's discoursing of plants, from the cedar of Lebanon to the Hyssop on the wall, as it is said in the book of Kings.

But there is good reason for believing that the larger and commoner Hyssop is the Hyssop of Exodus, and, indeed, of all the other texts. A bunch of Hyssop was used to sprinkle the blood of the first paschal lamb on the door-posts and the lintels of the Hebrews, when the angel of the Lord smote the first-born of Egypt ; and a bunch of Hyssop was used for sprinkling the altar and the people at the time of sacrifice, after the ceremonial of the law had been established.

I do not know at what precise period the Hyssop of aspersion began, in the Temple, to be tied with a thread or cord of scarlet to a handle of cedar wood; thus uniting the Hyssop, cedar, and scarlet, as ordered in the nineteenth chapter of Numbers to be cast into the burning of the heifer, whose ashes, mingled with water, were to form the water of purification, which was to be sprinkled over such as had become unclean, as a sign of readmission to the congregation. It was, however, a very ancient practice. I would humbly ask, if the Hyssop upon which St. John says the sponge steeped in vinegar was put, to be held to the lips of Christ upon the cross, might not be the Hyssop attached to its staff of cedar wood, for the purposes of sprinkling the people, lest they should contract defilement on the eve of the Sabbath, which was a high day, by being in the field of execution.

It is true that St. Matthew and St. Mark say the sponge was put upon a reed; but John, the disciple whom Jesus loved, was at the very foot of the cross, receiving that divinest legacy of the love of Christ's human nature, "Behold thy mother," and HE saw the sponge put upon that Hyssop, thenceforth the sign of purification to all mankind.

Whatever may be thought of this humble conjecture, it is certain that the early Christian church imitated the ceremonial of the temple of Jerusalem, in its music, its dresses, and even the minutest implements of the service. For some centuries a bunch of common Hyssop, tied to a handle, was used for sprinkling the holy water, the emblem of purification, over catechumens and penitents, and in such places as were to be purified either from profaneness or disease : and perhaps we may receive this as a proof that common Hyssop is, generally speaking, that of the Bible. To this day, the long-haired brush used in Roman Catholic churches for aspersing with holy water is called, in many places, the Hyssop.

Hyssop was formerly in great repute for coughs, and other complaints of the chest. It was also given, along with aperients, to relieve flatulence. Hence, probably, the expression of the Psalmist, "Purge me with Hyssop, and I shall be clean." In modern times Hyssop is almost forgotten by the apothecaries, but country people continue to place considerable reliance on its effects, and not without reason. Celsius enumerates eighteen herbs which different writers have supposed might be the real Hyssop, though his own

opinion is in favour of the common Hyssop. These eighteen are : — 1. Southernwood, 2. Wormwood, 3. Maiden-hair, 4. Alsinella, 5. Goose-foot, 6. Hyssopus Cochalcensis, 7. Greek Hyssop, 8. Roman Hyssop, 9. Common Hyssop, 10. Rosemary, 11. Marjorum, 12. Marum, 13. Mint, 14. Organs, 15. Poly, 16. Pulegium, 17. Wall-rue, and 18. Thyme.

IVY.

Hedera Helix,— Common Ivy.

Linnæan class and order, PENTANDRIA MONOGYNIA.
Natural order, ARALIÆ.

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2 Maccabees, vi. 71.

DURING the reign of Antiochus, who robbed the temple of Jerusalem and profaned the Sabbath, Judas

Macabeus and his family retired to the wilderness to avoid pollution, and await some favourable opportunity of restoring their country to freedom, and the people to a sense of their duty.

Meanwhile, however, Antiochus sent an old man from Athens, to see that the gods of Greece were worshipped in Judea. The Samaritans had gone before the king's wishes, and petitioned to have their temple on Mount Gerizim dedicated to Jupiter, the protector of strangers; and the Athenian missionary dedicated the temple on Mount Sion to Jupiter Olympus. Nor was this all; for, on the birthday of Antiochus, the feast of Bacchus was celebrated in Jerusalem, "and the Jews were compelled to go in procession to Bacchus, carrying Ivy."

It is on this momentous occasion only that Ivy is named in Scripture. But the very mention of this minute circumstance tells all the hardships of the yoke under which the wretched Hebrews were bent by the successors of Alexander.

Men accustomed to carry up their pure offerings, the first fruits of their flocks and herds, their fields and orchards, to the temple of the God of purity, were compelled now to carry the insignia of the deity

of license. Mingled with drunken women, polluted with the touch, if not the taste, of swine's flesh, they were forced to crown themselves with Ivy, and bear it in triumph, as a symbol of the false god, even into the courts of Jehovah! Can we wonder at the fierceness with which the Jews fought against such enemies?

But to return to the herb Ivy. It is common all over Europe and part of Asia. In the North of Europe, the chief variety consists in having leaves larger or smaller, or sometimes variegated.

IVY BERRY.

The Hedera chrysocarpus, or golden-berried Ivy, which is common in the Levant*, differs in nothing

* See Bauhin and Tournefort.

from common Ivy but in the colour of its fruit; and it is found occasionally in Italy, to the south of Rome. This was preferred by the ancient priests and priestesses of Bacchus, for the celebrations of the festivals of their deity. Hence it had the name of Hedera Dionysius.

An opinion has generally prevailed, that Ivy, even when worn as a chaplet, has the virtue of dispelling the fumes of wine. Its berries, indeed, have been used, as it is said, with good effect in the plague*; and this of itself might account for its favour in the East, and the attributing to it sovereign powers of healing.

A species of Ivy growing in Amboyna and other Indian isles, called Hedera umbellifera, yields a dull brown resin with a very powerful aromatic smell. The green wood and young shoots of our own Ivy have an agreeably bitter aromatic taste and smell, especially the leaf-buds springing from the joints of the climbing stems. Some of the ancient naturalists imagined that the Ivy with the beautiful three-lobed leaf was an entirely different plant from the berry-

* Their specific use is as an emetic.

bearing Ivy, because the terminal branches, which produce the fruit, bear leaves entirely different from those which grace the lower stem. Want of observation alone could have led to this error.

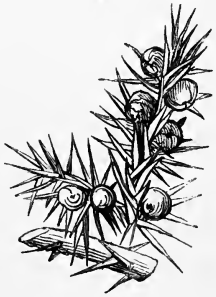
Ivy was long used as a vintner's sign, perhaps it is so used still in some places; and here it is the proper emblem of the wine within. But it must be on account of its unfading nature that it won its way into houses and churches, as a Christmas and New Year decoration; that it was strewed in this country upon the coffins of the dead, and planted on the grave as a sign of immortality.

This, perhaps, it is, also, which entitled it to the favour of the poets, who often claim it as their peculiar plant; and it would appear that it was an appropriate crown for the critic and the man of learning, for Horace, in his first ode, says—

> "An Ivy wreath, fair learning's prize,
> Raises Mæcenas to the skies."

In our own times, the literary men, and I believe women too, in Germany, delight themselves with forming at the back of their writing-tables screens of Ivy, which they take great pains to nourish and keep

green all the year. This they do in the spirit of Horace, and think thus to consecrate their studies to learning and criticism. Not so the Russians (at least those of the court and capital), to whom the custom has spread; they look to Father Bacchus, and say that their cooling Ivy-screens, secure the powers of thought and clearness of head amidst the deepest potations.



JUNIPER.

Juniperus communis, — Common Juniper.

Linnæan class and order, Dicecia Monadelphia.
Natural order, Conifera.

1 Kings, xix. 4, 5. Job, xxx. 4. Psalm cxx. 4, 5.

The first passage quoted above is from the history of the prophet Elijah, who, being persecuted by Jezebel and the priests of her false gods, fled to the wilderness, and sat himself down under a Juniper tree, and he requested for himself that he might die. In the next verse we find the angel of the Lord ministering to him, as he slept under a Juniper tree.

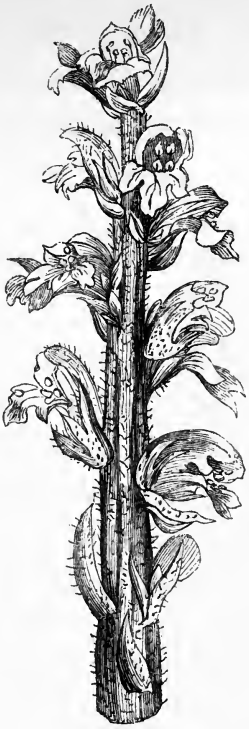
The Juniper is really a tree of the wilderness, where the larger kinds afford a thick shadow from

the heat of noon and the dews of night. Milton follows our own translation in the *Paradise Regained*, where he writes of the Saviour's dream, when he saw

> "the prophet, how he fled
> Into the desert, and how there he slept
> Under a Juniper."

In Sprengel's *Flora Biblica*, he maintains the same reading, against those interpreters who would read broom. The reason assigned for a change is this: that the roots of Juniper could not afford food, even such as might suffice to nourish the outcasts in the text of Job. Neither do they pretend that the root of the broom is eatable; but Ursinus suggests that, at the root of the Oriental broom, orobanche, or broom-rape, like our own is found, and that this when fried affords good nourishment.

Orobancheæ appear to be always parasitical; and it is said that the seeds of some species will lie dormant in the ground for years, until the root of the plant on which they are used to grow comes in contact with them, when they sprout immediately. They are never green: their leaves are converted into scales, and the stems succulent.



BROOM RAPE.

But whence were these outcasts to procure the fire, the utensils, and the condiments necessary to make the broom-rape eatable? If some more succulent vegetable than the root of either the Juniper or the broom were to be sought for a substitute on this occasion, there is the truffle of the desert, which the modern Arabs eat both raw and dressed while fresh,

and dry and preserve in bags for provision on their long journeys. But it would seem that the difficulty arising from the unfitness of Juniper roots for food exists only in those versions which, like our own and Luther's German Bible, have followed the vulgate implicitly. Other and older interpreters say that "they gathered Juniper roots for fuel," and the Spanish version, "they gathered Juniper roots to warm themselves;" and this agrees with the *coals* of Juniper, to which the Psalmist compares a false tongue. According to Celsius, the Medrash Teleilim countenances this reading of the psalm, by observing that "The Lord gave the people in the Desert Juniper to burn, wherewith they cooked their food."

There is an idea that the coals of Juniper acquire a greater heat than those of any other vegetable fuel, and also that they retain heat longer. Hence their fitness for the purposes of the people in the Desert.

There is, however, a circumstance very favourable to the opinion of those who would read broom in the texts quoted at the head of this section. It is, that the name by which the Arabs call broom is Retem or Rotam, the very word in the Hebrew texts.

Broom.

Linnæan class and order, DIADELPHIA DECANDRIA.
Natural order, LEGUMINOSÆ.

The peculiar Broom to which this is applied was first seen by Clusius in Mauritania, who describes it as very beautiful, white, abundant in flowers, and so large as to give shade. This same Broom is found all along the southern shore of the Mediterranean, and in the deserts of Arabia and Palestine.*

But to return to the Juniper; it is common to most wild parts of Europe and Asia. Britain, Sweden, Germany, abound in it wherever the plough has not uprooted it. Pallas tells us it spreads over all

* Rosenmüller speaks of it as the common Spanish Broom, from which, however, it differs greatly.

Russia and Tartary; it is not wanting among the Himalaya Mountains. From the great cedar Juniper to the common savine, it adorns the desert places of Syria, Palestine, and Arabia; and I have in my possession a Juniper plant of five years old, grown from seed gathered on Mount Sinai.

I believe all the Junipers yield gum sanderach, as well as the almug. The berries are valued not only for their medicinal qualities, but for the agreeable flavour they impart to spirituous liquors, whether distilled from wine or malt.

The spirit distilled over Juniper berries is the but too well known gin, which is probably less destructive of health and life than it might be, on account of the wholesome qualities of the berries.

In Europe, Juniper bushes are cut for fuel, and for making fine charcoal. Juniper smoke is much used in curing dried provisions, and is said to communicate their excellent flavour to the hams of Westphalia and the dried beef of Hamburgh.*

* The earliest notice of salted meat that I know of occurs in the apocryphal book of Baruch, vi. 28.; where he says: "As for the things sacrificed, the priests sell and abuse them; in the like manner, their wives lay up part thereof in salt."

I the rather mention these economical purposes to which Juniper is applied, because it sanctions the interpretation of the passage in Job which reads "Juniper roots for fuel;" but, indeed, whether the retem be really Juniper or Broom, the propriety of the reading, that "they gathered the roots for fuel," is evident.

LADANUM.

Cistus ladanifera,— Gum Cistus.

Linnæan class and order, Polyandria Monogynia.
Natural order, Cisti.

Gen. xxxvii. 25.; xliii. 11.

The name of Ladanum is not to be found in our translation of the Bible; but the best Bible scholars

and botanists are convinced that the word rendered myrrh, in the two passages of Genesis above quoted, should have been translated Ladanum. This drug is a sweet-scented gum-resin, exuding from the Cretan cistus, the Ladanum cistus, and some other varieties.

Of this resin Herodotus says that it was found sticking to the beards of goats, and that the Arabs mixed it with various aromatics; and, indeed, that it was Ladanum with which they perfumed themselves in common.

By the time of Dioscorides, it had been discovered that the gum exuded from the young branches of the cistus, upon which the goats browsed ; and the people of Syria and Crete availed themselves of the discovery, to procure the perfume in greater quantities than the combings of the goats' beards afforded. They made use of whips with broad leather thongs, with which, by passing them over the shrubs, they wounded them sufficiently to gather the juice, without destroying them ; and, after drying the whips in the sun, the gum was carefully scraped off. Still further improvements had been made before Tournefort travelled. The whip has assumed a more convenient form. To an instrument much

like a garden rake, they attach, in place of teeth, a double row of broad leather thongs, and thus sweep off the exudation, which is always most plentiful about sunrise. Nor do they neglect the most ancient collectors of Ladanum, for the beards and coats of the goats are still most carefully combed for the sake of the gum.

But, though Ladanum was chiefly valued by the early Arabs as a perfume, it was not neglected as a remedy for some complaints, as we learn from Hippocrates.*

The narcotic drug which Helen infused into the wine, to cheer and revive Telemachus and his companion, when they arrived at the house of Menelaus, seems to have been opium, or the hardened juice of the poppy. This precious drug, antidote to the pains of grief and anger †, Helen had received in Egypt from Polydamna, the wife of the priest Thone, "for Egypt teems with drugs." Many of these were native, many imported from Arabia, and by Arabian caravans, or ships, from the farthest isles of the East, whence they found their way to Greece, and

* See Sprengel, *Flora Hippocratica*, vol. i. p. 43. *Hist. Rei Herb.*

† Odyssey, iv. 277. of Cowper's translation. Sprengel, *Flora Homerica.*

passed for the productions of Egypt and Arabia without question.

The greater proportion of liquid Ladanum consumed in this and other countries is, in fact, tincture of opium. But the gum-resin Ladanum is much employed, with a mixture of frankincense, beat up with oil of mace and oil of mint, as a strengthening plaster; at the same time it soothes pain, and often procures sleep, not less than

> "That nepenthes, which the wife of Thone
> In Egypt gave to Jove-born Helena."

LEEK.

Allium Porrum,— Common Leek.

Linnæan class and order, Hexandria Monogynia.
Natural order, Liliacea.

LEEK.

Numb. xi. 5.

The sole mention of Leeks in the Bible occurs in the passage where the murmuring Israelites reproach Moses for having brought them into the Desert, and number up the delicious vegetables, garlick, Leeks, and onions, which they had left behind them in Egypt.

Leeks are indigenous in the countries bordering on the Mediterranean, and thrive particularly well in Egypt, where they now, as of old, form a considerable article in the food of the Fellahs or cultivators of the soil. Hasselquist saw them eating their Leeks and barley bread with a zest which he notices as superior to any they would have had with a meal of dainties.

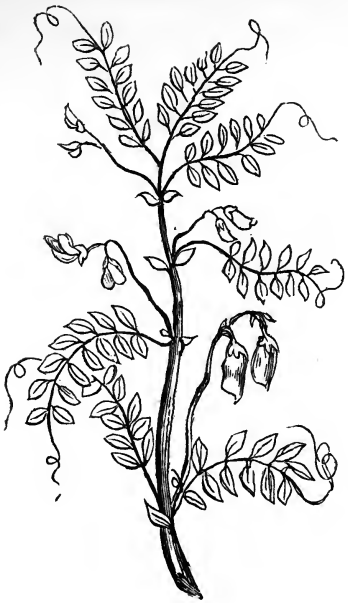
Some objectors to Scripture suggest that the Israelites could never have been permitted, while in Egypt, to feed on these vegetables.

> "When Leeks were sacred, and 'twas crime in sooth,
> To wound an onion with unholy tooth."*

* Juvenal, Sat. xv.

But these plants were never objects of general worship; particular towns venerated particular species, as, for instance, the onion* was adored at Pelusium. Such objects were, however, for the most part reverenced on account of their being dedicated to, or symbolic of, some well known deity, much in the way in which a Welchman reverences his Leek, the emblem of Wales, and wears one on St. David's day. That compliment paid, however, he would never think of denying himself the pleasure of eating his Leek, and no doubt the ancient Egyptians and their bondsmen made equally free with their savoury gods.

* More probably the sea onion, or squill.



LENTILS.

Cicer Lens,— Common Lentil.

Linnæan class and order, DIADELPHIA DECANDRIA.
Natural order, LEGUMINOSÆ.

Gen. xxv. 34. 2 Sam. xvii. 28.; xxiii. 11. Ezekiel, iv. 9.

THE pottage with which Jacob purchased Esau's birthright was red pottage of Lentils. The Lentil

was therefore one of the kinds of pulse most anciently cultivated, and the red Lentil is still esteemed the best of the three kinds grown in the South of Europe, Barbary, Egypt, and the Levant.

In the seventeenth chapter of the second book of Samuel, Lentils are among the provisions which the friends of David presented to him, for the sustenance of his troops, when he withdrew from Jerusalem, on account of the rebellion of Absalom; and Lentils are again mentioned in the same book, in the account of a battle fought with the Philistines in a field of Lentils.

The prophet Ezekiel names Lentils among the pulse and grains of which the mixed bread, typical of his prophecy, was to be made. And these are all the passages in which the Lentil is introduced.

In England the Lentil is little used, except as green fodder for cattle; because other and more hardy kinds of pulse thrive better and ripen better, particularly the pea and bean.

In Italy the cultivation of maize has partially superseded that of Lentils, especially in Lombardy and the Venetian states, where pollenta is infinitely preferred to Lentil pottage. There is, however, a

dish prepared, sometimes of Lentils, sometimes of caravanças, by the Spaniards and Portuguese, much more savoury than the fried slices of cold pollenta which are so commonly sold in the streets in Venice and Verona. It is made by half-seething the Lentil, and then mixing with it a little broth or oil, garlic, and pepper, with any pleasant herb that may be at hand, and baking it. This is a great breakfast dish, when made of caravanças, among the Chilian Spaniards, who probably learned it originally from their Arab masters. And who can say that the pottage of Jacob might not have been of this savoury description; particularly as we have evidence, in a subsequent chapter, of the dexterity of his mother Rebekah in the arts of cookery?

D'Arvieux says that the Arabs have a tradition that the spot where Esau sold his birthright is in Hebron, near the Cave of Macpelah; and, out of respect to the place, there is a college of Dervises near, who daily cook pottage of Lentils, mixed with potherbs, to distribute to the poor.

LIGN ALOES.

Aquilaria Agallochum,—Lignum Aloes, or Lign Aloes.

Linnæan class and order, Decandria Monogynia.
Natural order, Aquilarinæ.

LIGN ALOES.

Numb. xxiv. 6.

MANY centuries elapsed from the time when the precious fragrant Aloe-wood was first noticed by the ancients, before any probable conjecture concerning the tree producing it, or the region in which it grows, could be formed.*

At length the European merchants and missionaries discovered that the precious incense, Lignum Aloes, was produced in the peninsula of India beyond the Ganges, and in the Eastern islands. Father Loureiro had a branch of the tree, from which he describes it, sent him from Cochin China, where he was informed it grew among the mountains in the neighbourhood of the great river Laoum; a situation

* The Greeks called it Agallochum; and the Arabs, copying them, Agha-loo-choo, or, as some write it, Agalugi: both perhaps derived from its native Sanscrit name Aguru. In Hindi and Bengali, it is Aggur, Ugger, and Agor; and the Persians call it Owd-Hindi, or properly Hud (pronounced wood) Hindi or Indian wood. The Hebrew names are Ahalim and Ahaloth.

agreeing most remarkably with the words of the text: "As gardens by the river's side; as the trees of Lign Aloes which the Lord hath planted."*

The account Loureiro published at Lisbon of his Aloexylon Agallochum was not so exact as that given by Kæmpfer, in his *Voyage to Japan*, probably because Loureiro had only a mutilated specimen before him, and Kæmpfer had a whole young tree. They were both surpassed in accuracy by our countryman Cuninghame, who, about the same time when Kæmpfer went to Japan, was employed by the East India Company on the frontier of China. In his travels he must have seen the tree, for he gave a most exact description of its fruit.

Still there were different opinions concerning the true Aloe-wood, because those who furnished merchants with the drug in a marketable shape were careless, perhaps ignorant, of the plant which produced the commodity.

One missionary, Father Camellus, having written

* Loureiro sent a MS. with some specimens of this and other Oriental plants to Sir Joseph Banks, by a Captain Riddell, of the East India Company's service. But these were very defective. The good father afterwards improved in preparing his plants, and formed a set of very satisfactory specimens for a public collection at Lisbon.

that the juice of the bark of the Agallochum was acrid and injurious to the eyes, a tree which possesses that noxious quality, and also yields a perfume something resembling Lign Aloes, but very inferior, namely, the Excœcaria Agallochum, was taken for the real tree of incense.

At length some young trees, which had been sent from the mountainous part of Silhet to the Botanic Garden at Calcutta, produced flowers and fruit in the years 1809 and 1810, under the care of Dr. Roxburgh, whose account of the plant, and the manner of obtaining the precious parts of it, together with the notes of the late H. Colebrooke, Esq., I have been permitted to see and to use.*

It is a native of the mountainous parts of the East and South-east of Silhet, in about latitude 24° north; where it grows to the great height of one hundred and twenty feet, having a trunk of twelve feet in girth. In Asam it is of still larger growth.

The bark of the trunk is smooth and ash-coloured; that of the branches, grey, lightly striped with brown. The branches themselves are each divided into two

* The figure I have given is from a hitherto unpublished drawing, sent home by Dr. Roxburgh.

at the extremities, and the young shoots are covered with white silky hairs.

The wood is white, and very light and soft. It is totally without smell, and the leaves, bark, and flowers are equally inodorous.

The leaves are of a beautiful deep shiny green, lance-shaped, and from three to six inches long. The flowers, which are small and yellowish, grow in tassels of thirty or forty together, almost close to the branches and between the alternate foot-stalks of the leaves. The fruit is a sort of downy pale green berry, containing two cells for seeds, one of which is often empty.

The Utter Aggur incense, or perfume of the Lign Aloes, is procured from the wood when in a peculiar state, and the procuring it is a precarious and tedious business. Few trees contain any of it; and such as do, have it very partially distributed in the trunk and branches.

The people employed in cutting it go two or three days' journeys into the hill country of Jentya, in the dry season, and hew down without choice all the Tuggur trees, as they call them, young and old, fresh and withered, the latter being much preferred. In order to find the Aggur, or fragrant part, the moment

a tree is felled they chip off the bark and cut into the wood, until they find some dark-coloured vein, which generally encloses, in the very centre of the trunk or branch, a hollow wherein is deposited the oily substance sought for.

This dark portion of the tree sinks immediately in water and fetches a high price; it is called Gharkhi. That which is next, and retains some of the perfume, sinks, but not deep; and this is Nim Gharkhi. And there are still two other portions of different degrees of scent, which are saleable, though they fetch only one sixteenth of the price of the first. These last are both called Temlah.

It appears, from Mr. Colebrooke's notes, that, in some places at least, the decay of the timber necessary to form the secretion of the Utter, or fragrant oil, is accelerated by burying it in moist ground for a certain time. When dug up, the dark parts are found to have acquired, besides a deeper colour, a glossy appearance, and the whole sinks in water; the precious veins are separated from the less valuable portion with an iron instrument, and the rest of the wood is sorted into the three inferior kinds, as in the naturally decayed trees.

The oil is extracted by bruising the wood, and then laying it in water for a certain time, when the whole is distilled, and the produce of the still in cooling yields the essential oil.

An inferior perfume, called Chuwah Aggur, is prepared from the residue of the Aloe-wood after its first distillation, with the addition of a few bruised almonds or powdered sandal-wood.

Some of the choicest pieces of the Lignum Aloes sell for their weight in gold. They seem to have no smell until warmed by holding in the hand, when they become dewy, and exhale a most delicious odour, which does not soon go off. Some fragments of a piece of Lignum Aloes which had been in England several years, and appeared to have lost its smell, were burnt in a chamber, where at first they appeared to give out no fragrance, but shortly afterwards the perfume was perceived, and it did not go off for some time.

Besides the uses of Lign Aloes as perfume for man and incense for the altar, it has been employed time immemorial as a valuable medicine.

The Greek physicians knew it under the name of Agallochum, taken from the native word Aguruca; and the Arab writers copied the Greek, and called

it Agalugi. It is curious that the generic name, Aquilaria, should be derived from the Portuguese imitation of the same Indian name Aguru, or Agalu, in some dialects, and thus becoming Pao d' Aquila, or eagle-wood; the genus is Aquilaria, eagle-wood, the species Agallocha, also eagle-wood.

Rosaries, or strings of beads, of two kinds of eagle-wood, were brought into England in the time of Gerard, who says that one sort was harder, sweeter, and whiter than the other. These are used in the East, by both Brahmins and Mahommedans, to count their prayers, in the same manner as the Western nuns and monks use their beads. These have sometimes been taken for sandal-wood, because in truth that fragrant wood is often applied to the same purpose. It is perhaps from this fact, that some writers have supposed sandal-wood to be meant, where the fragrant wood of Aloes is mentioned in Scripture. The fragrant root of the Aspalathus of the ancients has also been taken for Lignum Aloes; but all these conjectures have been put an end to by the discoveries of Loureiro, Dr. Roxburgh, and his friends in Bengal.

It is most probable that the following texts, where

our version names simply Aloes, really allude to Lign Aloes: Psalm xlv. 5.; Proverbs, vii. 17.; Song of Solomon, iv. 14.

The Psalmist, speaking figuratively of Christ, says, "All thy garments smell of myrrh, Aloes, and cassia." In the Proverbs of Solomon the seducing woman is made to say, "I have perfumed my bed with myrrh, Aloes, and cinnamon." And again, in Canticles, the same royal poet couples together myrrh and Aloes, as things of equal price, and coming from the same distant land.

Whoever wishes to learn whatever the ancient Greek and Roman writers, or the Rabbins of old, and the Arabian physicians, have said and conjectured concerning the Agalochum, or Lignum Aloes, will do well to consult Celsius's most learned dissertation in the *Hierobotanicon*.

I will only copy from his pages his quotation from Abu Mansul al Thalebi's praise of India: "From her seas come the pearl, and her mountains produce jacynths. Her trees are Lign Aloes, and her bushes are fragrant with camphor."

LILY.

Lilium candidum,— White Lily.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, LILIACEÆ.

LILY.

1 Kings, vii. 19. 22, 23. 26.
2 Chron. iv. 5.
Song of Solomon, ii. 1, 2. 16.; iv. 5.; v. 13.; vi. 2, 3.; vii. 2.
Hosea, xiv. 5.
2 Esdras, ii. 19.; v. 24.
Ecclus. xxxix. 14.; l. 8.
St. Matthew, vi. 28.
St. Luke, xii. 27.

This most lovely flower is a native of Palestine, where it adorns the valleys with its beauty, and perfumes them with its fragrance. Indeed, the land itself has sometimes been called Phaselida, because it so abounded in Lilies.

We read in the books of Kings and of Chronicles, that the artists who decorated Solomon's temple chose the Lily for the capitals of the pillars; and, moreover, that the great cistern, or molten sea, had its edges wrought like the brim of a cup, with flowers of Lilies, —a due homage paid to the loveliness of the queen of the valleys of Palestine.*

The Lily of Solomon's Song, in those passages in the second chapter, "I am the rose of Sharon, and the

* I am aware that some persons, who will display their learning or their fancy, or both, insist upon it that the Temple was built on an Egyptian model, and that these Lilies were lotuses; but their arguments do not seem well founded: and why go to Egypt for the lotus, while the Lily adorned every field about Jerusalem?

Lily of the valleys," and "As the Lily among thorns, so is my beloved," should be translated jonquil, according to Sprengel, after the most ancient Chaldee and Arabic versions; and, as the jonquil, narcissus, and others of the Lily family, abound in Palestine, it is not surprising that the poet king should have varied the sweets to which he compared his beloved.

SOLOMON'S LILY.

Sprengel calls the narcissus jonquil also Narcissus Calathinus. I do not know whether it is the species called Modaf by the natives of the country round Aleppo, who cultivate it in open fields; and, towards the end of winter, certain Arab women are seen in the streets carrying baskets of the flowers for sale, and chaunting as they walk along, *Yā ma, hullu Zemanoo! Halku Kereem.* "How delightful its season! Its Maker is bountiful."*

Hosea says, of repentant and forgiven Israel, that he shall grow as the Lily; so, likewise, Esdras, speaking of the restored house of Jacob, writes: "I have sanctified and prepared for thee twelve trees laden with divers fruits, and as many fountains flowing with milk and honey, and seven mighty mountains, whereupon there grow roses and Lilies, whereby I will fill thy children with joy." And again, alluding to Israel; "O Lord that bearest rule, of every wood of the earth, and of all the trees thereof, thou hast chosen thee one only vine: and of all the flowers thereof one Lily." And twice the wise son of Sirach, calling upon the good to praise first the Lord, and

* Russel's *History of Aleppo.*

then holy men, compares the praises to the sweet smell of Lilies, to the Lilies by the waters.

But all these poetical passages in the Old Testament shrink into nothing before the exquisite simile in the sermon on the Mount, where Jesus says: "Consider the Lilies of the field, how they grow; they toil not, neither do they spin: and yet I say unto you, That even Solomon in all his glory was not arrayed like one of these."

At the moment of speaking the Saviour was seated on Mount Tabor, which is still a flowery hill, and looking over fertile plains to sheltered valleys, where the Lily springs up at every step; so that his hearers had only to look on either hand to the beautiful and stately flower, and behold its purity of colour and delicacy of texture, far exceeding all human workmanship, even for a monarch's wear.

When such is the fitness, the propriety of the simile divinely spoken in that place, I can scarcely comprehend the anxiety to displace the reading of the Testament, and substitute every and any thing for the Lily of Palestine.

Salt's scarlet amaryllis from Abyssinia, Le Vaillant's giant Lily from desert Africa, nay even

the fetid crown imperial, have in turns been proposed; but each and all ought surely to be rejected in favour of the true white Lily of Palestine.

LOCUST.

Ceratonia Siliqua,— Locust, or Carob Tree; St. John's Bread.

Linnæan class and order, Polygynia Tricecia.
Natural order, Leguminosæ.

St. Matthew, iii. 4. St. Mark, i. 6.

In these two passages the original word is *Akris;* in Luke, xv. 16., where our version has "husks," it is *Keratonia.*

Notwithstanding the evidence of the popular name, St. John's Bread, and the tradition that enabled the monks of Palestine long to exhibit a tree which, as they affirmed, produced food for the Baptist while in the Desert, it is not probable that he ate of any vegetable at all.

The original word, in the passages cited above from St. Matthew and St. Mark, signifies not the Locust tree, but the formidable insect of that name, whose occasional visitations in cultivated countries are dreaded as certain forerunners of famine, and generally of pestilence.

The locust was one of the many-legged creeping and flying things that the Jews were permitted to eat.* The Arabs still eat them, both fresh and dried; and, in Africa, not only the insects, but their larvæ, are sought after as dainties.

The locusts for food are always caught at night, when they are at rest, and carried in sacks to the nearest encampment or village, to be prepared for keeping. A very small quantity of water is put into a pot, and the locusts, piled up to the very brim, are covered

* Leviticus, xi. 22.

very closely, so that they are rather steamed than boiled. They are next carefully separated and laid out to dry, which the heat of an Arabian or African sun does thoroughly and speedily; after which they are winnowed, to get rid of the wings and legs, when they are laid in heaps, or packed in bags of skin, for future use. Sometimes the dry locusts are beaten into powder, of which, with water and a little salt, a kind of pottage is made.*

Such was most probably the diet of the Baptist in the wilderness, along with the wild honey, which even yet forms, whenever it can be procured, part of an Arab meal.

There can be no doubt of the meaning of the *Keratonia* of St. Luke. The swine which were under the charge of the prodigal son were fed, as domestic animals still are, on the fruit of the carob tree, the husks of which the unhappy swineherd would fain have satisfied his hunger withal. Sir Thomas Brown observes that the ancients made wine from the sweet pulp contained within the pod of the bean ceratonia,

* For this account of the method of curing locusts, I am indebted to Moffat's account of the missionary labours in Southern Africa.

and that the husks or mashed part, still mixed with the nourishing sweet pulp, were given to swine and other animals; and Sir Thomas makes no doubt that it was these sweet husks that the young man longed for.

This very handsome tree grows in the countries bordering on the Mediterranean, and in all its islands. It is chiefly valued on account of the abundant food it affords for cattle. The horses at Naples are seldom supplied with corn or pulse while the fruit of the carob tree is in season. The German coachmen who bring their hired horses into Italy complain, possibly without reason, that the bean of the carob, or Locust, fills their horses with wind. In Malta, cattle of all descriptions feed upon it, and in that island the tree grows in the highest perfection. Its roots penetrate into the fissures of the white rock, and its dark green shade forms a curious contrast with the white buildings, and the equally white tufa of which the island is composed. The effect of this contrast is most remarkable by moonlight. Then, seen with its terraced gardens, flat-roofed houses, and long lines of fortification, Malta might be taken for an island of the dead. No sound

is heard but the murmurs of the waves, as they wash the rocks, or a stilly breeze scarcely stirring the dark carob trees, which seem like funereal plumes waving over the tombs below.

MALLOWS.

Corchorus olitorius,—Jew's Mallow.

Linnæan class and order, MONADELPHIA POLYANDRIA.
Natural order, TILIACEÆ.

MALLOWS.

Job, xxx. 4.

Among the heartbroken moanings of Job, he says: "*Now* they that are younger than I have me in derision, whose fathers I would have disdained to have set with the dogs of my flock: .... for want and famine they were solitary ..... who cut up Mallows by the bushes .... for meat."

Of the many Mallows indigenous in Syria, Palestine, and Arabia, the Corchorus olitorius, or Jew's Mallow, appears to be certainly that of the patriarch. Avicenna calls it Olus Judaicum; and Rauwolf saw the Jews about Aleppo use the leaves as pot-herbs. In Purchase's *Pilgrims* there is a letter from Master William Biddulph, who was travelling from Aleppo to Jerusalem in 1600, in which he says: "After the shower, while our horses were preparing, we walked into the fields near unto the church (of Lacmihe), and saw many poor people gathering Mallows and three-leaved grasse, and asked them what they did

with it; and they answered that it was all their food, and they did eate it. Then we tooke pitie on them, and gave them bread, which they received very joyfully, and blessed God that there was bread in the world, and said they had not seen bread the space of many months."

The Mallow of Master Biddulph was doubtless the Corchorus olitorius; and this same Mallow continues to be eaten in Egypt and Arabia, as well as Palestine.

There is, however, a podded Mallow*, a native of the Levant, which is used in soups, and, among us, is sometimes served up at table like sea-kale or asparagus. It is an agreeable, soft, mucilaginous vegetable, the pod and seeds being equally delicate. I have eaten of it in Malta and in the East Indies, under the names of Okra and Bendy, and have also eaten it as Mallow in Brazil; at least, if it was of a different species, the plant, flower, and fruit are so like those of the East, that at the distance of ten years I took them for the same.

I cannot help thinking that this was the Mallow of

* The Hibiscus esculentus of Linnæus.

which Horace speaks, in his charming address to Apollo:*

"My food is olives,
"With endive and light Mallow."

And now having shown that the Mallow was used as an esculent vegetable in ancient as well as in modern times, and that the eatable kinds are to be found in various and distant countries, for even the Tartars and people of Japan have their Mallows, it appears to be needless to change the translation of Job in this text; for I believe that the Mallow he speaks of is really the Corchorus olitorius, though far from being the most nutritious of its kind. Celsius tells us that some have read nettle, and some purslain or orache, for Mallow; however, he prefers Mallow, guided probably, in some degree, by the Hebrew name *Malluach*, and in this opinion he is followed by Sprengel.

* Ode xxxi. book i.

MANDRAKE.

Cucumis Dudaim; which the Rabbins, as well as modern botanists, judge to be Atropa Mandragora.

Linnæan class and order, PENTANDRIA MONOGYNIA.
Natural order, SOLANEÆ.

Gen. xxx. 14, 15, 16. Song of Solomon, vii. 13.

THE manner in which the Mandrake is spoken of in the book of Genesis instructs us that it was not only

fair to look upon and pleasant to smell, but that it was exciting in its quality when first eaten, but produced, after a time, lassitude and sleep. This is probably the reason why the modern Arabians, who are fond of it, call it devil's meat.

In the Song of Solomon, the Mandrake is said to give a smell among all sorts of pleasant fruits, fresh and dry. And these are the only two places of Scripture in which the Mandrake are mentioned.

Nevertheless, it is one of the plants about which commentators of all countries and tongues have disputed the most.

At length, rational travellers and men of science having visited the countries where the Mandrake grows in perfection, the plant is acknowledged to be the Atropa Mandragora, which in this country is fetid, and reputed to be poisonous; the flower too is white, while that of Palestine is purple.

The root is spindle-shaped, and in colour not unlike a parsnip; when old it becomes forked, and it runs under ground to the depth of four feet or more. Immediately above the root is a tuft of leaves like an open lettuce, and from the centre of the tuft springs the flower. In England the fruit is green,

and no bigger than a nutmeg. In Palestine it is as large as a small apple, and of a beautiful ruddy colour and sweet smell. Hasselquist found them in Galilee: the Abbate Mariti in Judea. Burkhardt tasted them in the Jebel Heish; and Maundrel had heard them celebrated in Samaria.

The singular form of the root, when aged, suggested in ignorant times the notion that it represented man; and that with it witches might perform their foolish and mischievous rites, setting up the root, and calling it by the name of any person upon whom they meant to operate for good or ill. As the wretched persons laying claim to supernatural powers generally owed their reputation to a real knowledge of the use of drugs and simples, the herb basket of the witch was often a book of knowledge to the physician. There is a manuscript copy of the botany of Dioscorides at Vienna, in which he is represented as drawing a Mandrake root, held up for him in a convenient position by an attendant.

It would appear that the sorcerers had the secret of extracting poisons from this as well as other herbs, while the physicians were using them as beneficial medicines: but nobody seems to have doubted that

something mysterious, if not awful, belonged to the Mandrake.

It was believed that the root, when drawn from the earth, uttered such fearful shrieks that mortal ear might not hear them and live.* Hence it was, that, when they were required for the sorcerer's purpose, a dog, or some other animal, was to be led to the place where they grew, tied to the plant, and there left. The animal's struggles to escape tore up the desired Mandrake; but, at the moment, its unearthly shriek struck the creature dead, and in the morning (for the root was plucked up by night) the poor victim and the prize were found fast bound together. Such and still wilder fables were related of this simple plant, before science and good sense had taught us the folly of a belief in magic, and the real value of the herbs of the field. We now remember that, at the end of the sixth day of creation,

* Shakspeare alludes to this wild notion in the Second Part of Henry VI., where he makes Suffolk say:

"Would curses kill as doth the Mandrake's groan."

And again, in Romeo and Juliet, where she imagines beforehand the horrors of lying in the vault, where she may hear

"Shrieks like Mandrake's torn out of the earth,
That living mortals, hearing them, run mad."

"God saw every thing that he had made, and behold it was *very* good."

It is to ourselves we owe whatever evil may arise from the perversion of his gifts, for he has endowed us with talents and powers to use all he has created for good. The Mandrake is now eaten as a harmless, if not wholesome, fruit; and its power of soothing, and producing sleep, was not unfrequently used, before the more powerful juice of the poppy superseded it.

So lately as the reign of James I., the narcotic virtues of Mandragora were acknowledged and used: for Shakspeare makes Cleopatra call for a cup of Mandragora, that she may sleep out the great gap of time that Anthony is absent; and again, in that most terrible passage in Othello where Iago says,—

> "Not poppy nor Mandragora,
> Nor all the drowsy syrups of the world,
> Shall ever med'cine thee to that sweet sleep
> Which thou ow'dst yesterday,"

he names it as powerfully soothing, and disposing to sleep.

The ancient superstition regarding the powers of roots or herbs, especially when gathered at certain

periods of the moon, or when particular stars rose or set with the sun, seems to have been general over all the known world; and we find it now among the most uncivilised tribes of both hemispheres. The Negroes, Caffres, and Hottentots in Africa, and the North American Indians, rival the wizards of ancient Thessaly: and the transformations which the incantations of the latter were believed to effect had probably their foundation in a professional dress, akin to the bear-skin habit of a red Indian physician; whose basket of bones, and savage claws and teeth, would be incomplete, without such herbs as the Negro obi woman and the Thessalian Erictho sought to aid their practices, and gathered in plains which

> " A horrid crop produce,
> Noxious and fit for witchcraft's deadly use.
> With baleful weeds each mountain's brow is hung,
> While list'ning rocks attend the charmer's song;
> And potent and mysterious plants arise,
> Plants that compel the Gods, and awe the skies." *

Of late years another species of Atropa, the most poisonous, I believe, of our native plants, namely the Belladonna, has been adopted as a powerful remedy for complaints of the eyes, and in nervous affections of

* Lucan's Pharsalia.

the limbs. The fruit is sweet and very pleasant to the taste, but not, like that of the Mandrake, harmless; for many children have died from eating it.

Celsius, who is satisfied that the Atropa Mandragora is the Mandrake, gives the following list of plants which various commentators have proposed to substitute for it. Alkekengi, winter cherry, or Jew's cherry; the fruit of the lotus; strawberry; raspberry; blackberry; the Arab dustenbuje, a small fragrant kind of melon; Musa plantain, or Adam's apple; the fruit of the Paliurus Nabka; and, finally, a basket of figs,—*dudaim* meaning basket, and figs understood.*

* In the tract concerning the Mandrake by the celebrated Olaf Rudbeck the list is still longer, and alas! the reasoning and conclusion are but a memento of the "follies of the wise."

MANNA.

Alhagi Maurorum, formerly called Hedysarum Alhagi,— Camel's Thorn, or Judæan Manna.

Linnæan class and order, DIADELPHIA DECANDRIA.
Natural order, LEGUMINOSÆ.

MANNA.

Numb. xi. 7. Joshua, v. 12.

I AM not one of those who would explain the miracles recorded in the Old Testament by natural causes. Therefore I do not join in opinion, that the feeding the people with Manna in the wilderness, simply means that Moses led the people, at a time of scarcity, through that part of the Desert where the Manna-bearing shrubs abound.

Even had the shrubs been more numerous than we have reason to think they ever were, and produced their Manna as in the most plentiful season, the miracle by which it was collected in the Israelitish camp, so as to allow the people to gather sufficient for their wants, and on the sixth day to make provision for the Sabbath, would be incontrovertible; and far from me be the thought of laying an unholy hand on the veil of the Divine mysteries !

But there is no reason why we should pass over the Manna shrub of the wilderness, particularly as it is mentioned in two texts of Scripture which our version renders nettles. Besides, it must have been of

important service to the people of Israel in the Desert, as there is nothing which cattle delight more to browse upon; and in many places it furnishes the only fodder for camels in long journeys through the Desert, and hence the common name for it, of Camel's Thorn.

The two passages in which it is believed that Hedysarum Alhagi should be read, instead of nettle, are Job, xxx. 7., and Zephaniah, ii. 9.; in both of which places, the herb, whichever it may be, is merely mentioned as a sign of a desolate place.

Rawwolf has given a figure of the Alhagi, and describes it among the plants of the neighbourhood of Aleppo. He says it was an ell in height; that it bore many long sharp thorns, among which its pink flowers were scattered singly. There are from one seed to ten in the pods, which contract between each seed. It is rather scantily furnished with leaves. It does not produce Manna in the climate of Aleppo; but a great deal of that Manna which was of the very finest kind was, in his time, brought to that city from Mesopotamia, under the name of Trunsjebin or Tereniabin. The shrub itself is called by the Arabs, Agul, Algul, or Alhagi. On Rawwolf's farther progress, he describes his voyage down the Euphrates

from Birs to Bagdad; and, on landing at a town called Racka, he found the Alhagi bearing Manna.

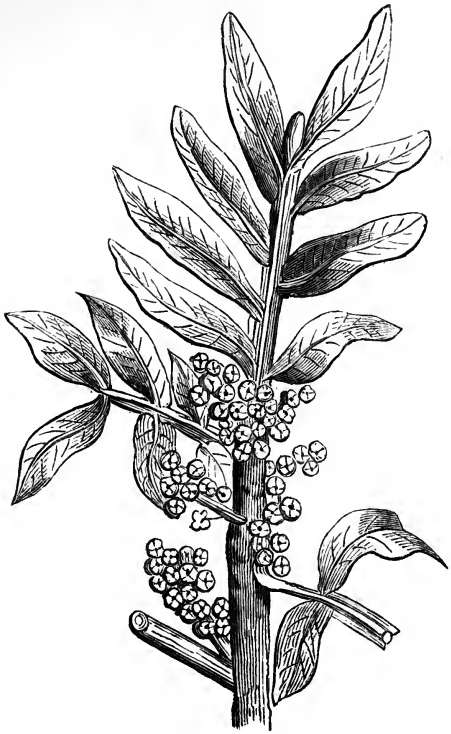
Dr. Russel, in his *History of Aleppo*, confirms Rawwolf's account of the plant in every particular.

As to the Manna itself, Rawwolf says it is perfectly round, a little bigger than the coriander-seed of Germany; and he compares it with the Manna secreted from the larch: and both are superior to the common Manna of the shops, which is the produce of various kinds of ash tree. The sweet sugary substance which exudes from the tamarix in the East, though called Manna, contains none of the peculiar principle of that useful drug, any more than the honey-dew, which, like it, seems to be the work of an insect*, and has been found on the low gall oak of Kermanshaw.†

The Manna of the Alhagi has been called Manna Hebraica. Tournefort calls the plant, Alhagi Maurorem. The name adopted by Linnæus is Hedysarum Alhagi, but Tournefort's name is now universally acknowledged.

* Coccus Manniparus.

† Since the above was written, I have read Rosenmuller's account of Manna. He seems rather to confuse the Manna and the honey-dew.



MASTICK.

Pistacea Lentiscus,—Mastick.

Linnæan class and order, Dicœcia Pentandria.
Natural order, Anacardiæ.

MASTICK.

Susannah, verse 54.

When, in answer to the supplications of the innocent Susannah, the Lord sent Daniel to do righteous judgement upon the false accusers, and to restore the virtuous woman to her father and to her mother, to her husband and to her children, the young prophet questioned the two elders (who not only bore false witness, but sat in judgement on the accused) as to where they had seen the sin committed. The answer of the first was, that he had seen Susannah and her companion under a Mastick tree: the answer condemned him at once, for his partner in falsehood said it was under a holm tree; proving that they both had lied.

Neither of these trees are mentioned elsewhere in our version of the Bible, though they abound in the Holy Land and the adjacent countries. The reason may possibly be, that the Story of Susannah is not found in Hebrew, and the Greek names may be applied differently. It is certain, however, that many texts in the Bible, where the word oak is used in our

translation, might have been more correctly rendered holm; and one or two writers have been willing, though apparently without reason, to suppose that the nut of the Mastick tree, instead of the true pistacea-nut, was the nut sent by Jacob, with honey and balm, to propitiate the, as yet, unknown Joseph.

The Mastick abounds in all the countries bordering on the Mediterranean; it is a very bushy tallish shrub, from which gum-mastick is procured from incisions in the bark made in autumn. This gum is used by the dentist in various ways; but with the apothecary it is chiefly applied outwardly.

Mastick forms an ingredient in some durable kinds of cement and stucco, but it is principally known as the basis of a very beautiful and lasting varnish.

I am loath to notice the puerile puns which the names of the holm and Mastick, in the Story of Susannah, have given rise to; and now I have mentioned their existence, I will leave it to the little-minded critics to explain and comment on them. A larger criticism allows for the temporary usages of language; and there appears nothing extraordinary in the fact that the Jews of Egypt, speaking and writing a not very pure Greek, should have fallen into the

practice of the less reputable writers, and have seized occasion to write down a pun, without at all meaning to shake the credibility of the story they were translating.

MELON.

Cucumis Melo, — *Melon.*

Linnæan class and order, Monœcia Syngenesia.
Natural order, Cucurbitaceæ.

Numb. xi. 5.

Melons were among the things anxiously desired and much regretted by the Israelites, during their progress

through the wilderness; and, indeed, their desires were not unnatural, when parched among the sands of Arabia, and remembering the cool juicy fruits of the Nile. Yet was their discontent a rebellion against their God, who in a supernatural manner had delivered them from a cruel bondage, and was even then leading them to that good land which he had promised to the descendants of Abraham, Isaac, and Jacob.

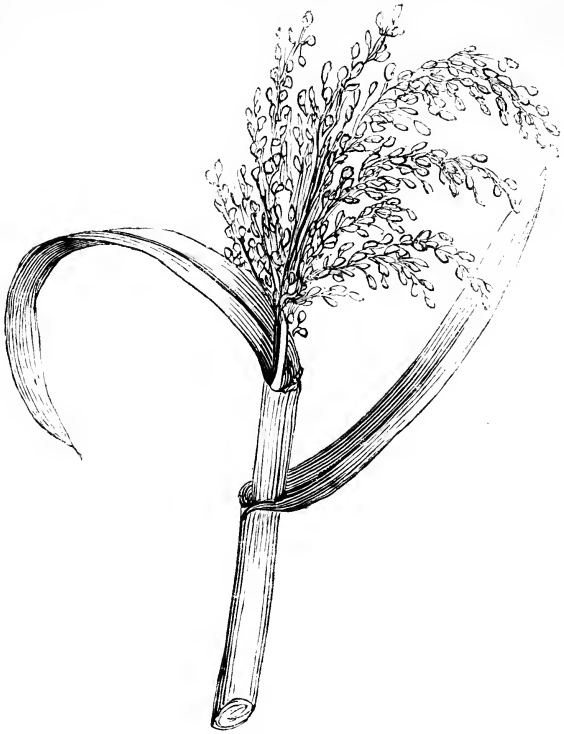
The Citrulla, or Water Melon, though not highly flavoured, is one of the most refreshing fruits of a hot climate. The very sight of the crisp flesh bedewed with its cool watery juice is invigorating, and seems to give spirit to the happy beggar of the South, who is rich enough to purchase a slice, just as wine and strong drink do to one in a cold climate, but without their evil effects. The various kinds of Musk Melons, all of them to be seen in Egypt, deserve a place next to the Water Melon, as cooling and adapted to the climate, notwithstanding the prejudice against eating them which many persons entertain; a prejudice, indeed, felt and acknowledged by Hasselquist.

It is not possible, at this distance of time, to determine which was the fruit lamented by the Hebrews, because, among other reasons, we have no means of

knowing which species was most cultivated at that period, or whether all that now adorn the markets of Cairo and Alexandria had then reached the perfection they now display.

The modern people of Syria and Palestine salt and dry Melon seeds, and use them fried, as a pungent and rather coarse condiment, with rice, lentils, and other pulse.

The Arabs of the coast of Barbary have for many centuries practised the best arts of gardening, which in their prosperous times they introduced into Spain: among these arts is that of engrafting Melons and other cucurbitaceous plants, in order to ameliorate the fruit and increase its quantity. In our northern climates, the Melon tribe is not sufficiently valued to induce our gardeners to so much pains-taking.



MILLET.

Panicum Miliaceum, — Common Millet.

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINEÆ.

MILLET.

Ezekiel, iv. 9.

The only notice of Millet in the Bible occurs in the list of grains and pulse of which Ezekiel was to make his mixed bread, as a type of the nature of his prophecy.

Millet is, however, a common grain in the East, and has been cultivated there from the earliest times. The species mostly grown now in the Levant is the Panicum Miliaceum, of which there are two sorts, the white and the yellow; both are imported, though sparingly, into England, for making soups and puddings, for which purposes Millet is inferior to rice or pearl barley.

In France, Germany, and England, two other species of Millet, the lendigerum with spiked panicle, and the effusum with scattered panicle, are cultivated; but in England none of them are much esteemed.

Some persons have supposed that Holcus Sorghum, or Guinea corn, was intended in the text; but that is unlikely, Guinea corn being peculiar to Africa, while Millet is one of the grains of Palestine.

MINT.

Mentha viridis, — *Spear Mint.*

Linnæan class and order, Didynamia Gymnospermia.
Natural order, Labiatæ.

MINT.

St. Matthew, xxiii. 23. St. Luke, xi. 42.

Among the lessons which our blessed Saviour thought fit to inculcate by severe precept, was that against hypocrisy. For he says, according to Matthew, "Woe unto you, hypocrites! for you pay the tithe of Mint, and anise, and cummin, and have omitted the weightier matters of the law:" or, as St. Luke writes, "Woe unto you, Pharisees! for ye tithe Mint and rue, and all manner of herbs, and pass over judgement and the love of God."

Nothing can more strongly shadow out the sin of those who, by petty external observances, think to redeem their souls from the punishment due to the practice of vice.

Mint is among the commonest of our herbs, and, though valuable as a medicinal plant, is too common and too easily propagated to be of any price; so that the Pharisee taxed himself lightly indeed, who paid but the tithe of Mint.

Various species of Mint are common all over

Europe and Asia, but the common Spear Mint and Pepper Mint are those mostly set in gardens; the latter is entirely grown for the apothecaries' use, but Spear Mint is not only beneficial as a remedy, but highly agreeable as a potherb.

I know not whether it was originally one of the bitter herbs with which the Israelites ate the Paschal lamb*; but our use of it with roast lamb, particularly about Easter time, inclines me to suppose it was. Mint continues to be used by us, as it was by the Romans according to Pliny, both green and dry, in many kinds of pottage, and to boil with pulse and other things, to impart sweetness to their flavour.

* The modern English Jews eat horse-radish and chervil with it.

MULBERRY.

Morus nigra and M. alba, — *Black and White Mulberry.*

Linnæan class and order, Monœcia Tetrandria.
Natural order, Urticeæ.

MULBERRY.

2 Sam. v. 23, 24.
1 Chron. xiv. 14.
1 Maccabees, vi. 34.
St. Luke, xvii. 6.

The two texts of the Old Testament in which the Mulberry tree is directly mentioned are repetitions of each other; and relate to the victory obtained by King David over the Philistines, in the valley of Rephaim*, when he was miraculously warned of the proper moment to attack the enemy, by a noise on the tops of the Mulberry trees.

We do not find the Mulberry named again, until the account of the war between King Eupator and Judas Maccabeus, when the king's people irritated the elephants to make them fight, by showing them the blood of grapes and of Mulberries.

The passage in St. Luke concerning the Mulberry is not translated in our version, for the original Greek name for the Purple Mulberry is retained: "And the Lord said, If ye had faith as a grain of mustard seed, ye might say unto this sycamine† tree,

* Rephaim, the Giants.

† Celsius.

Be thou plucked up by the root, and be thou planted in the sea; and it should obey you."

Thus it is certain that the two latter texts refer to the Purple Mulberry, although the White Mulberry is the most common in Syria and Palestine; and of such were, probably, the trees of the valley of Rephaim.

The Purple and the White Mulberry are both natives of Persia and the adjacent countries. When left to grow naturally, the White Mulberry attains to the greatest height, and is the handsomest tree, though the fruit is far inferior to the other: but the White Mulberry is cut into very ugly shapes, and kept low; in order that it may produce a larger crop of leaves for feeding the silkworms, which are bred in prodigious numbers in Syria. In the neighbourhood of Mount Lebanon, the land tax of the peasants is assessed according to the number of mule loads of Mulberry leaves their little farms produce; so that the cultivation of the tree is directed to favour the growth of the leaf, at the expense of the fruit.

All travellers in the Holy Land agree in praising the beauty of the natural groves of Mulberries that adorn it. One part of the vale of Baalbec is called

Bekaa*, from the abundance of its Mulberry trees. It is described as charmingly verdant, and watered with frequent rills gushing from the neighbouring mountains, and maintaining constant freshness in the air, and vigour in the herbage.

Most Oriental houses have one or more inner courts, surrounded by arcades, into which the various apartments open. Where there is more than one court, the master's apartments look into the principal one, and then the whole is laid out as a garden, with a fountain or two, a tree for shelter, and abundance of roses and other sweet-smelling shrubs, among which the henna, or Lawsonia inermis, is a favourite. Where there is but one court, the side next the master's rooms is reserved for the shrubbery; and the poorest house about Aleppo, having a yard only a few feet square, is sure to have its Mulberry tree, and some sweet-scented shrub, if not its fountain. †

In the southern parts of the Holy Land, a palm tree is usually planted in the court: towards the north, it is the Purple Mulberry; the pleasant juice of

* Some have interpreted Bekaa, weeping; if this be right, is it figurative of the numerous rills that flow into it?

† Russel's Aleppo.

whose fruit, mingled with water in which the sweet-scented violet has been infused, forms one of the most grateful kinds of sherbet.

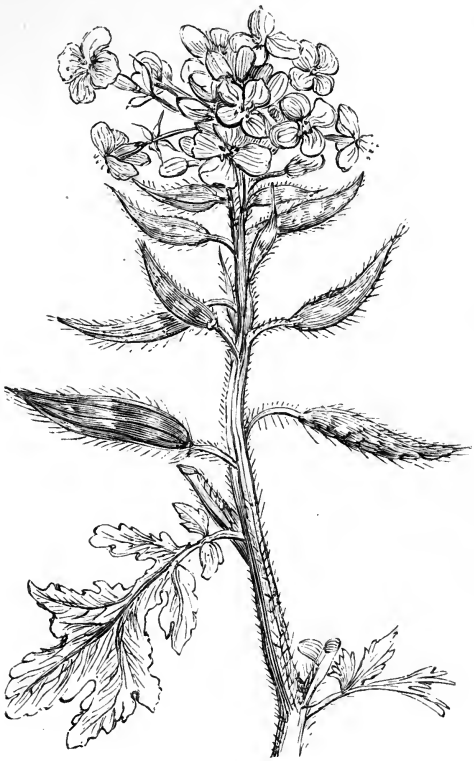
The Oriental custom of having inner courts to the houses, adorned with shrubs and trees, was carried by the Arabs into Spain, whence it migrated to South America; and much hospitality have I experienced in Chili, sitting on the estrada, or raised floor of the arcade, shaded by orange and citron trees, and surrounded by roses, Arabian jasmine, and other memorials of Europe, mingled with the fuchsia and other beautiful native shrubs.

I know not at what period the Mulberry began to be cultivated in England. We have the authority of Shakspeare's Mulberry tree, to show that there were full-grown ones before the middle of the sixteenth century. It is most likely, that, among many other fruits, with various vegetables and flowers, we owe it to the Crusaders. In their days of enthusiasm, he who brought a plant, a twig, a seed, from the Holy Land, be his condition what it might, was sure of a good reception in the monasteries; the gardens of which became the nurseries whence many countries have been supplied with new kinds of food, and new

pleasures added to those already known to the eye and the palate.

James I., when he attempted to introduce the culture of silk into England, had a number of White Mulberry trees imported; but they do not appear to have thriven well, as there are few now surviving.

The ancients used the bark of the Purple Mulberry in medicine, and it still holds its place in the Pharmacopœias. The tree is of very slow growth, and continues in vigour for several centuries.



MUSTARD.

Sinapis nigra, — Common Black Mustard.

Linnæan class and order, TETRANDRIA SILIQUOSA.
Natural order, CRUCIFERÆ.

MUSTARD.

St. Matthew, xiii. 31.; xvii. 20. St. Mark, iv. 31.
St. Luke, xiii. 19.; xvii. 6.

All three of the evangelists above quoted relate the parable which I will repeat in the words of St. Luke. "Unto what is the kingdom of God like? It is like a grain of Mustard seed, which a man took and cast into his garden; and it grew and waxed a great tree, and the fowls of the air lodged in the branches of it."

This passage has been a stumbling-block to commentators, who, in their criticisms, seem to have forgotten two things: first, the very low plants and shrubs upon which birds often roost, and even build; and, second, how much larger many of our common herbs become in a warm climate. Some Jewish writers mention Mustard trees of enormous size, especially one under which tents might be spread: but these are probably fables, unless the writers refer to a very different species of Mustard.*

* Sir Thomas Brown, with his usual good sense, says of this passage of the Gospel: "The expression, that it might grow into such dimensions that birds might lodge in the branches thereof, may be literally conceived; if

Captains Mangles and Irby, in their *Travels*, after speaking of the common Mustard, which reached to their horses' bridles, mention a tree whose leaves and fruit have the taste of Mustard, and produce the same effect on the eyes and nose: they give neither native nor European name to the tree, but remark that the birds did actually lodge in it.

Their description, as far as it goes, agrees with that of the Salvadora Persica; whose seeds are very minute, with the strong pungent taste of cress; and which has been suggested as the probable Mustard tree of the Jews, and therefore that of the parable. Linnæus calls it Rivina paniculata, and Forskal Cissus arborea. It is described as having a crooked rough trunk, branching at eight or ten feet from the ground, and measuring a foot in diameter; the branches droop like the weeping willow, and have smooth shiny leaves, with bunches of very minute flowers at the ends.

It is much valued for its medicinal qualities in the

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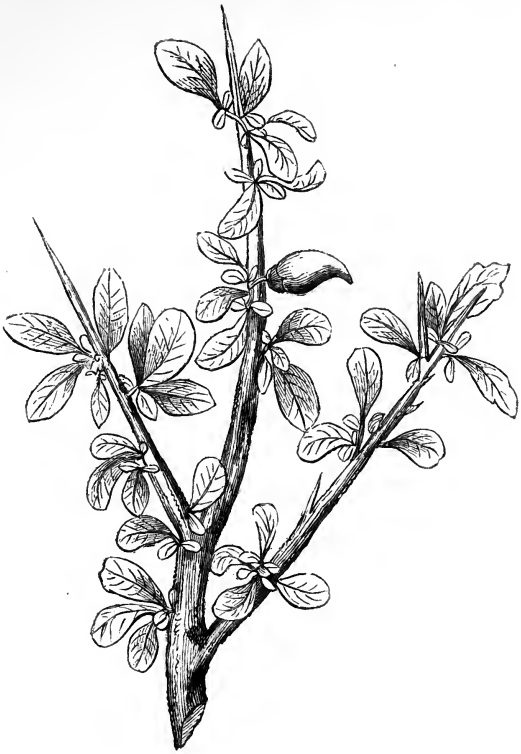
we allow the luxuriancy of plants in Judæa above our northern regions; if we accept of but half the story taken notice of by Tremellius, from the *Jerusalem Talmud*, of a Mustard tree that was to be climbed like a fig tree, and of another under whose shade a potter daily wrought."—*Observations upon several Plants mentioned in Scripture.*

East, and these qualities curiously coincide with those of our own Durham Mustard.

Of this last Hippocrates writes by the name of Napi, and Dioscorides also speaks of its powers as a remedy in some disorders. From Pliny we learn that the ancients, like ourselves, used it as a condiment.

Various kinds of Sinapis were found in Syria and Palestine by Hasselquist, precisely like those of our northern climates. But the natives of the country do not use it so commonly as we do: for it appears that, in the neighbourhood of Aleppo, the Franks sent their servants to collect it for their tables in the hedges, because there was none then grown in the gardens; and Russel, in his *History of Aleppo*, mentions the same fact.*

* It is a pity, that, in several works of great use recently published, the very strange notion that the Phytolacca is the Mustard of Scripture is admitted; that plant being well known to be a native of America, and never seen on this side of the Atlantic till a very few years ago.



MYRRH.

Balsamodendron Myrrha, formerly called Amyris Myrrha, or Kataf,—Myrrh.

Linnæan class and order, Octandria Monogynia.
Natural order, Terebintaceæ.

MYRRH.

Gen. xxxvii. 25.; xliii. 11.
Exodus, xxx. 23.
Esther, ii. 12.
Psalm xlv. 8.
Song of Solomon, i. 13.; iii. 6.; iv. 6. 14.
Ecclus. xxiv. 15.
St. Matthew, ii. 11.
St. Mark, xv. 23.
St. John, xix. 39.

I HAVE already noticed that the verses in the 37th chapter, and also in the 43d, of Genesis, in which our version reads Myrrh are not rightly translated; the meaning of the Hebrew word in those places being, not Myrrh, but ladanum.

In the book of Exodus, Myrrh is one of the ingredients of the holy oil, to be used for anointing the priests and various parts of the altar of the tabernacle; after which there is no mention of it in the Bible, until we find it employed in the purification of Esther and her young companions, in the palace of Babylon, before they were presented to the king.

In the 45th psalm of David, and in Solomon's Song, Myrrh is reckoned among the chief perfumes and spices and precious fruits, with which the regal poets love to compare the excellence and purity of Christ and of his church.

In the 24th chapter of Ecclesiasticus, Wisdom says of herself, "I yielded a pleasant odour like the best Myrrh." So that we are not surprised that among the offerings brought by the wise men from the East, at the birth of Christ, St. Matthew should mention Myrrh along with gold and frankincense.

St. Mark speaks of the wine mingled with Myrrh which the Jews offered to Jesus, just before they crucified him; that the whole ceremonies belonging to condemnation and execution, according to their customs, might be fulfilled. For they gave wine and strong drink to those about to perish, to render them insensible to their sufferings. "But he received it not." His comfort was from above; and he prayed, "Father forgive them, for they know not what they do."

The last mention of Myrrh in Scripture is in the Gospel of St. John, where the evangelist relates the pious act of Nicodemus, who brought a hundred pounds' weight of Myrrh and aloes to embalm the body of Jesus; and it was wrapped with his body in a linen cloth, and laid in the tomb.

This gum, so highly valued by the ancients, is no longer in request as a perfume; but its medicinal

qualities are now better known. It is administered as a tonic medicine with great success, and it is known to be a powerful styptic.

It was not till our own time that any thing concerning the trees producing Myrrh was known, except by imperfect traditions, pointing to Arabia and India as their native country. It is certain, however, that no Indian plant produces true Myrrh, though a great deal reaches the European markets by way of India. This, it appears, is the produce of Socotra and Abyssinia, especially the country about the Straits of Babelmandel, whence the Arab ships convey it to Bombay or Calcutta. But this drug is particularly dirty, and mixed with other gums, chiefly gum Arabic. The Arabian Myrrh reaches Europe through Turkey, scarcely in better condition than the other.

Dr. Ehrenberg of Berlin found the true Myrrh tree at Gison, on the borders of Arabia Felix. He describes it as a small tree, growing among acacias, moringas, and euphorbias. The wood is yellowish white, the bark smooth, and of an ashen grey; the leaves, on short stems, are imperfectly ternate. He saw no blossom, and but one fruit; but he gathered Myrrh from the trunk. Nees v. Esenbeck received

it from him, and has figured it *; but finds it not to be distinguished, in description at least, from the Balsamodendron Kataf. The two figures he has given are, however, very different. I shall place one of them at the head of this article, and the other at the head of that on Stacte, which, by the account of Pliny, was only a finer kind of Myrrh.

* In his *Dusseldorff's Officinäler Pflanzen.* See also Royle's *Illustrations of the Botany, &c., of the Himalaya*, p. 176.

MYRTLE.

Myrtus communis,— Common Myrtle.

Linnæan class and order, Icosandria Monadelphia.
Natural order, Myrtaceæ.

Nehemiah, viii. 15. Isaiah, xli. 19.; lv. 13. Zech. i. 8. 10, 11.

On the return of the Jews under Nehemiah to their own land, after the Babylonian captivity, the people

were ordered to cut down palm branches, and Myrtle branches, and olive branches, and other trees, to make them booths, wherein they might renew the feast of tabernacles, and hold it to the Lord as their fathers had done in their own land. The booths being prepared, the people were assembled, and, before the solemn feast began, Ezra, who had so large a share in bringing back the children of Abraham from their captivity, read aloud in their hearing the books of the law, which had been preserved, notwithstanding the disastrous condition of the nation.

To this day the dispersed families of the house of Israel adorn the booths and sheds in which they observe the feast, as well as their position will allow, with Myrtle, as of old. And as no palm branches can be had in our climates, the London Jews substitute for these a branch of flowering almond, which they present in the synagogue, having a piece of Myrtle and two or three twigs of willow fastened to it with a golden thread.

Isaiah, the mighty poet, prophesying the coming of Christ, says: "When the poor and needy seek water, and there is none, and their tongue faileth for thirst, I the Lord will hear them; I the God of Israel will

not forsake them; I will open rivers in high places, and fountains in the midst of the valleys; I will make the wilderness a pool of water, and the dry land springs of water; I will plant in the wilderness the cedar and the shittah, and the Myrtle, and the oil tree."

And again, foretelling the marvels of the same stupendous event, he says: "Instead of the briar shall come up the Myrtle tree; and it shall be to the Lord for a name, for an everlasting sign that shall not be cut off."

In the remarkable vision of Zechariah, the prophet saw the angel of the Lord standing among the Myrtles, questioning the spirits whom the Lord sent to walk to and fro through the earth. "And they answered the angel of the Lord that stood among the Myrtle trees, and said: We have walked to and fro through the earth, and behold all the earth sitteth still, and is at rest."

In this passage the prophet doubtless had in mind that justice is the typical meaning of the Myrtle among the Jews; and where so fitly could the enquiring angel execute his high commission, as surrounded by the emblems of justice?

Milton had surely this passage in his thoughts, when he makes Adam instruct Eve, that

> "Millions of spiritual creatures walk the earth
> Unseen, both when we wake and when we sleep."

We do not find the Myrtle again named in our version of the Scripture; but the feminine form of the Hebrew word for it occurs in the name Hadassah, which was that of Esther, while she lived in her uncle Mordecai's house. She was thus named, not only on account of her justice, but because she was the protector and shelter of her people, even as the Myrtle of the wilderness had comforted the congregation during their forty years' wandering.

The extreme beauty and grace of the Myrtle have obtained for it the suffrages of the poets of all times and countries. Our saintly Milton places it in the blissful bower of Paradise, which was

> "A place
> Chosen by the sov'ran planter, when he framed
> All things to man's delightful use; the roof
> Of thickest covert was inwoven shade,
> Laurel and myrtle, and what higher grew
> Of firm and fragrant leaf."

The Romans seemed to have regarded it as one of

the flowers fit for coronals at rural feasts; for Horace, rejecting the gaudy chaplets of the city feasts, desires, at his happy home, nothing better than a crown of Myrtle.

In ancient Italy, the berries and flower-buds of the Myrtle were used as a kind of spice; and the modern Tuscans, and the people of Syria and Palestine, still frequently substitute it for pepper. The bark and root are invaluable for tanning the fine Russian and Turkish leather, to which they communicate a peculiar colour and perfume. In Italy the leaves are used by the country-people to dress the skins of their flocks, while the brushwood is made into brooms, and the stock and roots are used for fuel in many places.

Nothing is more beautiful than a Myrtle thicket, where the dark glossy foliage is studded with white starry flowers, and not a foot can step without wakening the charming odour of the fallen leaves. Such thickets adorn the hill sides of Italy; and such, too, according to Hasselquist and Burkhardt, still clothe the hills about Jerusalem: mixed with the Nerium Oleander, they shed fragrance over the shores of the Sea of Tiberias; and, stretching far up into the

valleys of Lebanon, refresh the traveller and pilgrim on their curious or their pious way, to explore the country which Faith has made holy ground.

NETTLES.

Urtica Dioica,— Common Nettle.

Linnæan class and order, Monœcia Tetrandria.
Natural order, Urticeæ.

NETTLES.

Job, xxx. 7. Isaiah, xxxiv. 13.
Proverbs, xxiv. 31. Hosea, ix. 6.
Zephaniah, ii. 9.

In the very chapter of Job in which the juniper and mallow are mentioned as the signs of desolate places, we find the Nettle a few verses farther on, along with the uncultivated bushes, as a still greater sign of barrenness.

In the book of Proverbs it is said: "I went by the field of the slothful, and by the vineyard of the man void of understanding; and, lo, it was all grown over with thorns, and Nettles had covered the face thereof." A picture among the most impressive and picturesque to be found in any writer, of the baleful effects of sloth.

The prophesy of Isaiah against Idume has been already quoted: "Thorns shall come up in her palaces, Nettles and brambles in the fortresses thereof." How true to nature this picture is, all who have trodden the ruins of towers and palaces can tell; and, throughout his whole book, truth of description, allied to the

sublimest poetry, is the character of this prophet. Nearly to the same effect, Hosea prophesies of fallen Israel: "The pleasant places for their silver, Nettles shall possess them, thorns shall be in their tabernacles." And again, in Zephaniah, the breeding of Nettles is one sign of perpetual desolation. Now there is nothing in any of these five passages of Scripture which, either for the sake of sense or beauty, requires the substitution of any other plant for the Nettle. Nevertheless, as two different Hebrew words occur in these places, it is not without reason that there should be some difference of opinion as to the proper rendering of them.

Celsius brings good authority for maintaining the translation of *Kimosh* by Nettles, in Proverbs, in Isaiah, and Hosea. Sprengel is inclined to contradict him, and would substitute the Hedysarum Alhagi, or Alhagi Maurorum, in those passages, as well as in Job and in Zephaniah. This shrub certainly springs up in desert places, and was common in the country of Job.*

But Nettles are equally common in the desert

* See, under the head MANNA, the shrub Alhagi.

places, and more frequent near cultivated lands, being sure to seize on any rich soil, especially where the husbandman has lately been at work. Hasselquist found both Urtica dioica and Urtica pilulifera in Palestine. The Nettle was probably not utterly despised in Jewry. It appears always to have been used as a potherb; and in a dairy country, such as part of Judea was, the quality of its salt decoction, which curdles milk without communicating any bad taste, must have been really valuable.

NIGELLA.

Nigella sativa, or N. Orientalis,—Nigella, Black-seed, or Gitta.

Linnæan class and order, Polyandria Polygynia.
Natural order, Ranuncula.

Isaiah, xxviii. 25. 27.

In this passage Celsius and other commentators reject the word fitches, and produce good authority

for supplying its place with Nigella, or the Black-seed as the Arabs call it. The Nigella is much esteemed in the East; where it is common, even now, to strew it over the floor of the oven before the bread is put in, and to sprinkle it over the loaves, and even to knead it into the dough, as I have seen done with poppy seeds in Bohemia and some parts of Germany. The seed of the Nigella is used in this manner, and also by way of pepper, in Egypt, Persia, and India, as well as in Syria and Palestine; and very powerful, as well as healthful, qualities are ascribed to it. It is, however, one of the crowfoot tribe, many of which are most virulent poisons. But this plant, under the strange name of fennel flower, was formerly cultivated in our kitchen-gardens as a potherb; but, like many others, it has been displaced by Eastern spices, which, besides the aroma in which they mostly surpass the herbs of our climate, have the advantage of being at hand in all seasons, summer and winter alike.

NUTS.

Juglans regia,— Walnut.

Linnæan class and order, Monœcia Polyandria.
Natural order, Juglandeæ.

Gen. xliii. 11. Song of Solomon, vi. 11.

Nuts were among the fruits of the land of Canaan that did not entirely fail during the dreadful famine

that laid waste that country, and from which even the fruitful Egypt was only saved by the foresight of Joseph. Accordingly, Jacob, when he sent his sons a second time to buy corn, and permitted his beloved Benjamin to go along with them, reckoned them among the presents he wished them to take, in order to propitiate Joseph, and secure the well-being of Benjamin, and perhaps, also, the liberation of Simeon, whom Joseph had kept as a hostage.

The Pistacea Nut was most probably, if not certainly, the Nut in question, though some have suggested the smaller and inferior fruit of the terebinth. The Pistacea grows plentifully in all the land of Canaan, and the Nut is highly valued throughout the East. It is used both raw and parched; bruised, and mixed with honey and a very small portion of wheaten flour, it forms a delicate cake; and not only the natives of the East, but the Italians, employ it in many forms of confectionery.

The Pistacea vera grows to the height of 25 or 30 feet; the bark is dark brown, and the pinnated leaves are of a darkish glossy green. The insignificant flowers grow upon the two-years-old wood, and the Nuts grow singly.

The pistacea is not, however, the "Nut" of Solomon's Song. "I went down to the garden of Nuts," says the poet king, "to see the fruits of the valley." But here the garden of Nuts was not formed of the stunted pistacea, but of the stately Walnut; and the Hebrew word should have been so rendered in our translation. In this reading Sprengel follows several other writers, some of whom mention the modern Arabic name, which resembles the Hebrew word used by Solomon, as corroborative of their opinion.

There is scarcely a modern traveller who does not speak with admiration of the Walnut groves of Syria and Palestine, where the tree is indigenous as well as in the northern provinces of Persia and all Asia Minor. The Walnut, the mulberry, the olive, the pomegranate, all delight nearly in the same situations; the myrtle and Oriental arbutus are seldom far off; and a degree farther southward, or half an hour's journey downward to the plain, adds the citron and the rose-bay to this delicious vegetable group.

Something of the same kind may be enjoyed in the Italian valleys about Palestrina or Præneste. The oak and chesnut, the hasel and pistacea, the Walnut and

the olive, occupy the summit and declivities; at the bottom the plantations of mulberries are diversified with the cherry, the plum, the apple, the orange, and the citron, hedged in with myrtle and arbutus.

As in Italy, the Walnut of the Levant is important to the merchant*; and in the district of Lebanon the Nuts themselves fetch a large price, and the oil is of great value. When fresh, it is eaten in common with olive oil, and the refuse is largely employed in making soap. Walnut oil is also used in dressing woollen cloths, though inferior for that purpose to the oil of sesamum.

The smooth and delicately grained timber of the Walnut is fit for ornamental furniture, though in this country it is now superseded by mahogany; but its lightness and toughness recommend it for gun-stocks; and, during the last war, as much as forty pounds sterling has been given for a single tree, for that purpose.

In Circassia, the tree is pierced in the spring, and a spigot is left for some time in the hole: when this

* In the Campagna and its bordering hills, the Nuts, though used as food, are still more valuable for the oil they produce, Walnut oil being almost exclusively used by painters in Italy.

is withdrawn, a clear sweet liquor flows out, which is considered by the Circassians as a valuable remedy for diseases of the lungs.*

* Walnuts are subject to a duty of 2*s*. per bushel, and in 1841 the net proceeds were 3,371*l*.

OAK.

Quercus,— Common Oak.

Linnæan class and order, Monœcia Polyandria.
Natural order, Cupuliferæ.

Gen. xxxv. 4. 8.
Joshua, xxiv. 26.
Judges, vi. 11. 19.
2 Samuel, xviii. 9, 10, 14.
1 Kings, xiii. 14.
1 Chron. x. 12.
Isaiah, i. 29, 30.; ii. 13.; vi. 13.; xliv. 14.
Ezekiel, vi. 13.; xxvii. 6.
Hosea, iv. 13.
Amos, ii. 9.
Zech. xi. 2.
2 Esdras, xiv. 1.

These are the texts in which, according to our English version, the Oak is mentioned by name in

Scripture; but there are nine other places in which the best commentators think that, instead of the word *plain*, the name of the Oak, or of some other strong tree, should be introduced.

The texts in question are the following :—Genesis xii. 6., xiii. 18., xiv. 13., xviii. 1.; Deut. xi. 30.; Joshua, xix. 33.; Judges, iv. 11., ix. 6. 37.; 1 Samuel, x. 3. I have compared the texts in the translations into six of the principal modern tongues*, to see how far they agree with ours, with each other, and with modern commentaries.

The Spanish version gives the *Alcornoque*, Oak, of Moreh, instead of the plain of Moreh; and the *Alcornocal*, Oak grove, of Mamre is always substituted for the plain.

The passage in Joshua is rendered by a compound proper name; and the texts in Judges give valley and plain, but with a marginal note, in which Ilex, or Oak, is preferred.†

* The French Geneva Bible; Deodati's Italian Bible; Luther's German Bible; the Spanish version called the Bear's Bible, because it has the symbol of Berne, where it was printed, on its titlepage; the Dutch, and the Danish Bibles.

† It is remarkable, that in Judges, ix. 37., where we read the pillar of Sichem, the French have, *Le chenain des devins*, the *Oak grove of*

The Dutch also render the *plains* of Moreh and Mamre by *Eychenbosch*, Oak grove; while the four other versions agree in reading the plain of Moreh and of Mamre with our own. Yet all read Oak in the other passages.

Since the time of the Reformation, when most, if not all, of these versions were made, Bible criticism has been a favourite study among the learned, particularly in Germany; and, in consequence, many certain, and some probable, mistakes have been pointed out in the names of the trees and other plants mentioned in different versions of the Bible. Some objections appear to have been made on insufficient grounds, and some in the very wantonness of criticism; and, finally, some because very good Hebrew scholars are occasionally bad botanists.

There certainly appear to be good grounds for the criticism that goes to prove that the Oak is sometimes put in place of the terebinth, or some other strong and thick tree; and for the terebinth they have to

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the prophets; the Germans, *Zauber Eich*, the *enchanted Oak;* the Danish, *Trolders Egg*, the *soothsayer's Oak.* On turning back to the twenty-fourth chapter of Joshua, we find that he set up a great stone, or pillar, under the Oak that was by the sanctuary in Sichem.

plead the authority of many traditions recorded by ancient writers, particularly Josephus. He says that in his time a terebinth was shown at Mamre, evidently of great age, as that under which Abraham had entertained the angels; and that, in the valley where David slew Goliath, the grove of terebinths which gave its name to the place was still in existence.

Wishing to obtain something like certainty on the subject, and despairing at the time of procuring a sight of Celsius's extraordinary work, I took the liberty of applying to the Rev. Dr. Hyman Hurwitz, a Jewish gentleman whose well known kindness encouraged me to apply to him, as one of the most learned Hebrew scholars of our country. His reply, great part of which I copy below, contains a satisfactory explanation of some of the causes of the various readings.*

* "Many Hebrew names of inanimate objects appear under two forms, masculine and feminine, without any difference in their signification. Now the feminine form of the word for Oak is *Allāh*, Jos. xxiv. 26.; but the word most frequently used is the masculine form *Allōn*, Gen. xxxv. 8.; Isaiah, vi. 13.; Hosea, iv. 13. The plural of this is *Allōnim*, Ez. xxvii. 6. The genitive plural is *Allōnâ*, Isaiah, ii. 24.

"We now come to the Terebinthus. The masculine form is *Ail* or *Ailōn*, Gen. xiv. 6.; *El-Paran*, Judges, ix. 6.; and in combination with *Moreh*, Gen. xii. 6. The plural is *Ailim* or *Alim*, Isaiah, i. 29.; meaning also

The Quercus Æsculus is thought by many to be the Oak of Scripture, because it is very frequent in the climate of Syria and Palestine. The sacred grove of Dodona, whence the oracular beam was cut which guided the Argonauts on their expedition, was of this Oak; and therefore scholars have been fond to think that the oars of the ships of Tyre, mentioned by Ezekiel, were of the same wood. But the common Oak (Robur), the Turkish Oak, the holm, besides various evergreen Oaks, are abundant in all parts of Palestine; and the hills of Bashan are so decorated with them, especially the Quercus Robur, that the English traveller, on reaching them, is perpetually reminded of the woodland scenery of his own country.

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any large or stately tree or trees, and hence the name Elim (Exod. xv. 27.; xvi. 1.) is derived. The feminine form is *Ailah*, Gen. xxxv. 4.; Isaiah, i. 30.; vi. 13. Genitive *Ailath*, genitive plural *Ailoth*. These are the origin of the proper names Eleth or Elath, Deut. ii. 8.; 2 Kings, xvi. 6.

"The rendering *Ailon Ailone* (Gen. xii. 6.; xviii. 1.) by plain originated in the Chaldee version of Onkelos; not that either of the words mean plain, but the plains of Moreh and Mamre are so named from the trees which grew there."

It is not wonderful that others have confused the names of the Oak and the Terebinth, since Celsius himself, in his dissertation on the subject in the *Hierobotanicon*, takes *Allah*, the feminine form of Oak, for *Ailah*, Terebinth.

In the early books of Scripture the Oak is always mentioned as connected with some sacred place, rendered holy by the near neighbourhood of a sanctuary, an altar, a pillar of memorial, or the grave of some remarkable person.

After Abraham had left the land of Haran, at God's command, and had journeyed into Canaan, his first resting-place was at the Oak of Moreh* and in the place of Sichem; which Oak, even at that time, probably marked a sanctuary; for when Joshua made a covenant in Sechem, with that numerous people descended from Abraham which Moses had led up out of Egypt, he placed the pillar of the covenant "under an Oak that was by the sanctuary of the Lord."

Again, Abraham came and dwelt in the Oak grove of Mamre† and builded an altar unto the Lord.‡ "And the Lord appeared unto Abraham in the Oak grove [*plain*] of Mamre, and he sat in the tent door in the heat of the day." Abraham's hospitable recep-

* Plain of Moreh, English version.

† Plain of Mamre, English version.

‡ The altars of the Patriarchs were of turf, or of rough unhewn stone. See Exodus, xx. 24, 25.

tion of the three strangers who bore the message of the Lord is related as follows. "He said, let a little water I pray you be fetched, and wash your feet, and rest yourselves under the TREE." He does not say, on the plain, or in the tent, but under the tree, the chief tree of the grove.

The first time our version mentions the Oak refers to the Oak in Sichem. When Jacob learned that his wives, on leaving Padan Aram had brought away the family teraphin, or sacred images of their father Laban, he collected them all and buried them under the Oak in Sichem, already a consecrated place; thus disposing reverently of what had been objects of worship in his father's family, but, at the same time, depositing them where it would have been a violation of the holy place of the God of Abraham to have sought them again.

A few verses farther on, we read of the death of Deborah, Rebekah's nurse, and that Jacob buried her under the Oak that was in Bethel; that is, the very place where Abraham had rested and built an altar to the Lord. And the place where Deborah was buried was called Allon Bachuth, or the Oak of Tears.

It is remarkable that the sixth chapter of Judges contains not only a confirmation of the sacred character of the Oak, but an account of the desecration of an Oak grove, and its adjacent sanctuary, because it had been perverted to the use of the worshippers of Baal, or the sun.*

Under a peculiar Oak the angel of the Lord appeared to Gideon, and gave him the divine commission to set Israel free; and under that same Oak Gideon built an altar to the Lord. But the grove hard by, belonging, as would appear, to his father's house, Gideon was commanded to destroy, because the offerings to Baal had polluted it.

In the first book of Samuel, Saul is directed to go to the Oak† of Tabor, at which spot he should meet a man to conduct him to the high place of the prophets, among whom, after his being anointed king, he was to receive the divine spirit of prophecy, and to become another man.

Before any farther mention of the Oak occurs

* The same degraded image of God, doubtless, as that worshipped by the druids of the West, in their Oak groves and their open sanctuaries.

† In our version, plain; but the propriety of reading Oak here is most obvious.

in Scripture, David had been for some time king instead of Saul, and had resolved on building a house to the Lord, a design fulfilled by Solomon his son. From that period the use of groves and high places was forbidden, on account of the temptation to idolatry which they presented.

But the Oak was to David a fatal tree; for in an Oak his rebellious but still beloved son Absalom was entangled, and there slain.*

Twice again the Oak is spoken of in the historical books of the Old Testament. It was under an Oak that the disobedient prophet sat, when he determined to turn back, and to eat and to drink, in defiance of the command of God; and so incurred the punishment deserved by his spirit of disobedience†: and it was under the Oak of Jabesh that the compassionate men of Jabesh-Gilead buried the bodies of Saul and his sons.‡

The prophets, those greatest of poets, delight in drawing their images from the trees of the forest. How does Isaiah, in his bitterness, reproach the sinful

* 2 Sam. xviii. 9, 10, 11. † 1 Kings, xiii. 14.
‡ 1 Chron. x. 12.

people! "They [the natives] shall be ashamed of the Oaks which ye have desired; and ye shall be confounded for the gardens which ye have chosen. For ye shall be as an Oak whose leaf fadeth, and as a garden without water." Again, when he prophesies that "The mighty looks of man shall be humbled, the Oaks of Bashan shall be brought low, along with every one who is proud and haughty."

Then with what a beautiful image he comforts the repentant people!—"As a teil tree, and as an Oak, whose substance is in them when they cast their leaves, so the holy seed shall be in the substance thereof;" that is, in the remnant of the oppressed people.

In writing of the Ash and of the Cypress, I have already referred to that most magnificent passage, where the master prophet sternly numbers up the trees of the forest designed for man's proper use, but perverted to the purposes of idolatry; and with bitter scorn rebukes the sinners.

Next, the eager Ezekiel takes up his prophecy against the idolaters, thus: "Then shall ye know that I am the Lord, when their slain men shall be among their idols round about their altars, upon every high

hill, in all the tops of the mountains, and under every green tree, and under every thick Oak.*

When Ezekiel next names the Oak, it is in its character of the "builder Oak," applied especially to its proper use, namely, part of the furnishing of the Tyrian ships. From the time of the ship Argo, whose beams of Oak were cut in the forest of Dodona†, to our own, the Oak has been, and must be, preferred for all those purposes requiring strength and durability; and it is observable, that all the words rendered Oak, in our version of the Bible, have a root signifying strength.

* Ezek. vi. 13. Here the Spanish Bible has *Enzina*, Ilex.

† Tradition, as authentic as history, ascribes the establishment of the sanctuary and oracle of Dodona, in an Oak forest of Epirus, to two Phœnician priestesses, or, as the poets write, two black doves from Phœnicia, who brought an olive branch in the ship they arrived in, recommending the inhabitants of the country to cultivate the olive, the first tree springing from the branch then brought. One of the doves, the poets say, remained perched on the branch of a tree of the forest, and prophesied and pronounced oracles. The plainer tradition says that one of the priestesses remained at Dodona, established a sanctuary, and taught a religion, and some of the arts of cultivation, to the then savage people. The other dove, or priestess, journeyed as far in Africa as the oasis where the oracle of Jupiter Ammon was fixed; and there, among the thick trees of the oasis, a sanctuary and oracle were set up. The Oak was no longer, however, the sacred tree. The burning climate encouraged other vegetation, and the Thuja Articulata, the Algum of Scripture, surrounded and protected the religious establishment of the African oracle.

Zechariah imitates Ezekiel in reprobating the idolatry practised under the thick Oaks, because the shadow thereof is good.

Amos, exhorting the people to remember the favour and the power of God, says, "I destroyed the Amorite before them," who "was strong as the Oaks:" and Zechariah, in his lament, calls upon the Oaks of Bashan to howl for the desolation of the people of God.

The apocryphal prophet Esdras was sitting under an Oak, when the voice of the Lord from the thicket pronounced that memorable warning: "to set his house in order, to let go from his mortal thoughts, to cast away the burdens of man, and to put off the weak nature."

Thus almost every text in which the Oak is named treats of it as something sacred or venerable, a character which it received also throughout the Western heathen world.

The Oak was sacred to the highest gods of Greece. It was planted by the side of the most venerated sanctuaries, and even the trees themselves were supposed to be endowed with a prophetic character.

In Rome, the Oak was, again, the tree of their chief

god; and of its leaves was formed that crown, the most honourable of all, that was to be earned by saving the life of a citizen. At first it appears that only the common oak (Quercus Robur) was used for the civic crown, afterwards the Evergreen Oak, and finally any species, provided the acorns were with the leaf.

In Iberia, Gaul, and Britain, the Oak was held in especial esteem. The grove of Oaks was indispensable to the worship of the druids, who not only sheltered their altars and adorned their sanctuaries with them, but, like Israel at Allon Bachuth, they planted them on the graves of their dead. Celsius has many curious and learned observations on the subject of burial under trees; and quotes, from the ancient *Hervorar Saga*, the example of the hero Angantyr and his brothers, buried under the trees in Samsoe. *

Such coincidence of custom, between the nations of Western Europe and those of the land of Canaan, as may appear too close to be accounted for by the natural spreading of Noah's family over the earth, may safely be ascribed to the communication carried

* See farther, under the head TURPENTINE TREE, or TEREBINTH.

on by the Phœnician ships with every port in the known world. The great druid temples of England are matched by those recently discovered in Syria, Palestine, and Asia Minor: and it would appear that the very form in which the Eastern Moloch was served, polluted the later worship of the British druids.

The religion of the Patriarchs, pure and simple, demanded nothing more than prayer and praise, and an offering at a simple altar over which no tool of iron had been raised: but, before the children of Abraham came up out of Egypt, superstition and idolatry had possessed the earth, and it became necessary that a new law should be declared among the people of God.

Then were the rough altar and open sanctuary still tolerated, and even purified for a season, to serve until the people should have multiplied, and filled the land of promise.

This being accomplished, the ancient places of worship were desecrated for ever; the Oak groves were no longer holy; a temple, framed by the hand of man, was accepted in their stead.

That the sanctuary and grove were still lawful

places of worship, after the promulgation of the written law, is certain, from the fact that Joshua, though present at the giving of the commandments from Mount Sinai, did, towards the end of his ministry, set up a sacred pillar under an Oak that was by the sanctuary of the Lord in Sichem; and that, too, on no less occasion than the covenant made with the whole people.

But it is time to take leave of the most venerable of trees. Its use is of importance in our every-day life; the grand character of its beauty gives it the preeminence in our forests; in its long life it sees a hundred generations of men pass away. Well, then, was it consecrated to be the first temple to the worship of its Maker!

OLEASTER, WILD OLIVE.

Elæagnus spinosa,— Wild Olive.

Linnæan class and order, Tetrandia Monogynia.
Natural order, Elæagni.

Romans, xi. 17. 24.

" If the root be holy, so are the branches. And if some of the branches be broken off, and thou, being

a Wild Olive, wert graffed in among them, and with them partakest of the root and fatness of the Olive tree; boast not against the branches: . . . . . for God is able to graff them in again. For if thou wert cut out of the Olive tree which is wild by nature, and wert graffed contrary to nature into a good Olive tree: how much more shall these, which be the natural branches, be graffed into their own Olive tree?"

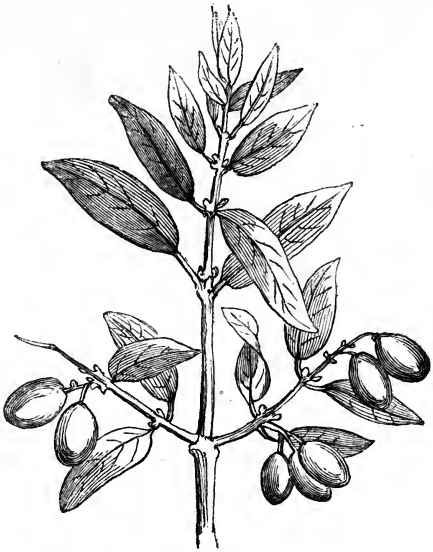
This beautiful figurative argument of St. Paul is the only passage in Scripture in which the Wild Olive is mentioned; though the tree, or rather large shrub, is so common in Judea, that Pallas, in the *Flora Rossica*, gives the words "thorn of Jerusalem" as one of the synonymous names.

The Elæagnus spinosa grows to the height of fourteen or sixteen feet. Its berries resemble those of the Olive, and its yellow flowers emit a most fragrant smell. Sometimes they are laid in oil of Olives or of nuts, to which they impart an agreeable perfume; but their chief use was formerly as the principal ingredient in a medicinal water, supposed to be of great importance as a remedy for the plague, and other contagious diseases.

There are several varieties of the Elæagnus, of which the angustifolium is the only one which bears the severity of our winters. That called orientalis is supposed to be the zaccoum of Oriental travellers, which monkish tradition has substituted for the sycamore on which Zaccheus climbed to see the triumphal procession of Christ into Jerusalem.

The poor monks make a little money by showing this tree, and a little more by the sale of what they call oil of zaccoum, to pilgrims. This, they affirm, is produced by the berries of that single tree; and they ascribe to it almost miraculous powers of healing.

The medicinal properties of the elæagnus do not seem to have been acknowledged by the Greeks, who, however, paid it high honour; for of its branches the crowns of the victors in the Olympic games were woven, and it was generally called among them *callistephanos*, or the beautiful garland.



OLIVE.

Olea Europæa,— Cultivated Olive.

Linnæan class and order, DIANDRIA MONOGYNIA.
Natural order, OLEACEÆ.

OLIVE.

Gen. viii. 11.
Exod. xxiii. 11.; xxvii. 20.
Deut. vi. 11.; viii. 8.; xxiv. 20.; xxviii. 40.
Joshua, xxiv. 13.
Judges, ix. 8, 9.; xv. 5.
1 Sam. viii. 14.
1 Kings, vi. 23. 31, 32, 33.
2 Kings, v. 26.; xvii. 32.
1 Chron. xxvii. 28.
Nehemiah, v. 11.; viii. 15.; ix. 25.
Job, xv. 33.
Psalm lii. 8.; cxxviii. 3.
Isaiah, xvii. 6.; xli. 19.
Jeremiah, xi. 16.
Hosea, xiv. 6.
Amos, iv. 9.
Micah, vi. 15.
Habakkuk, iii. 17.
Haggai, ii. 19.
Zech. iv. 11, 12.; xiv. 4.
Judith, xv. 13.
Matthew, xxi. 1.; xxvi. 30.
Mark, xi. 1.; xiv. 26.
Luke, xix. 29.; xxii. 39.
Romans, xi. 17. 21. 23.
James, iii. 12.
Rev. xi. 4.

With reverence I write of the Olive. The Olive, symbol of peace and forgiveness, was the first green thing seen by that pure family, whom faith and hope had led into the ark, when the dread punishment of the everlasting God rushed in the floods of heaven, and from the broken up springs of the deep, upon all flesh.

So was the Olive a type of that greater mercy and forgiveness, when, in the fulness of time, the law with all its ceremonial, its feasts under tabernacles shaded by the Olive, and its ever-burning lamps fed with the

consecrated oil of the Olive, should have passed away, and the Saviour and Redeemer be born.

While he condescended to remain on earth, where may we, on so many important occasions, trace his steps, as on the Mount of Olives? There he sat when he wept over Jerusalem. In a village of that Mount he condescended to human friendship, and proved his human nature by affection and by grief, being moved like as we are. Finally, the garden on the Mount of Olives witnessed his agony and resignation. There the inward sacrifice was completed by the words, "Father, if it be possible, remove this cup from me. Nevertheless, not as I will, but as thou wilt." And from the Mount of Olives he visibly ascended to the Father, having gained the victory over death, and begun the reign of peace on earth, good will towards man.

The Olive branch brought to Noah by the dove was not only a sign of peace, but of the recovered fertility of the earth. The Olive was to form a main part of the riches of the land promised to Abraham. Moses and Joshua tell the people of their inheritance of Olive trees, which they have not planted.

The beautiful fable of Jotham tells of the fatness

of the Olive, whereby "they honour God and man." The oil of the lamps of the Temple, the anointing oil for the altar and the priests, and the oil of the first-fruits, were humble offerings in honour of God. The anointing of the kings, by command of God, was an especial honour to man; and hence one of the Oriental customs of hospitality was, and still is, to offer to a respected guest oil, generally perfumed, to anoint his head, after having refreshed him with water for his feet.

The prodigious quantities of oil produced in ancient Judea may be estimated from the number of measures annually sent by Solomon to the King of Tyre, besides what was required for the home consumption of a people who used vegetable oil, instead of any animal fat, in cookery; who consumed little, if any, wax for candles in common domestic life; and, therefore, depended for artificial light upon the oils procured from seeds and fruits, of which the Olive was the chief.

It appears, from the epistle to the Romans*, that the Jews grafted their Olives, using the stock of the Wild Olive as an improvement to the fruit.

* xi. 17.

In Italy, where the Greek method was probably followed, the Olives were only occasionally grafted; and the Olive tree was generally propagated, as it still is, by removing the suckers, which spring up in abundance annually from the roots of the old trees, and planting them in a fresh soil. Thus managed, the Olive soon comes into bearing; and there are few trees which can compare with it for length of life, and a long succession of productive seasons.

Some of the most ancient in the world still grow on the Mount of Olives, especially in the garden of Gethsemane. Travellers have doubted whether, as the poor monks who show them say, they are the same under which Jesus sat. First, they object the age of the trees, and then that Titus cut down every tree, in order to furnish himself with warlike machines, during the siege of Jerusalem.

To the last objection might be answered, that Olive wood is little fitted for such purposes, and that most probably the young trees at any rate would escape; besides, Titus would hardly have been at the pains to dig up the large spreading roots of the Olives, whose nature it is to fix themselves to rocks and stones, and which must have had many a hold in the fissures and

rents of the limestone rocks of the Mount of Olives. Though no other trees remained, the annual shoots which arose from those ancient roots may surely be considered as branches of the very trees, so precious to the imagination of the Christian pilgrim.

As to the objection founded on the age of the trees in the garden of Gethsemane, there are other Olive trees which claim an equal date. For instance, there is at Gericomio, on the mountain road between Tivoli and Palestrina, an ancient Olive tree of large size, which, unless the documents are purposely falsified, stood as a boundary between two possessions even before the Christian era, and in the second century was looked upon as very ancient. That tree produced a large crop annually, even so late as 1820; and may perhaps be still, as it was then, the pride of the neighbourhood.

Pliny says the Athenians of his time showed an Olive tree, which they said was coëval with the city, and therefore sixteen centuries old; and he mentions an Olive yard, planted by the first of the Scipios, about seven centuries before he wrote, and which was then in vigorous bearing.

Modern travellers tell us of aged Olive trees, near

the banks of the Ilyssus, which probably witnessed the discourses of

> "Divine philosophy,
> From Heav'n descended to the low-roof'd house
> Of Socrates."

But a wiser than Socrates sat under the trees of Mount Olivet; and his precepts, dark at the moment of utterance, but made light by the one great and pure sacrifice, changed the condition of man, and placed him under the safeguard of a wisdom to which all human philosophy is but vanity,

> "Loses discountenanced,
> And like folly shows."

The oil of Jewry was, in ancient times, as much valued for its excellent properties in food and medicine, as for its purity and quantity. The leaves were also used by the ancient surgeons, in the composition of many plasters and liniments.

The timber of the Olive tree has been in all times esteemed excellent for furniture and ornamental carving. Homer says the nuptial bed of Ulysses was of Olive wood. The club of Polyphemus was also of Olive; and from that lofty poet, who was a keen observer of nature, whether in the great or the

minute, we find that the handles of tools for domestic use, as well as those of warlike weapons, were of the same solid wood. In modern times the little town of Chiaveri, near Genoa, is famous for its light and elegant Olive wood chairs; and the delicate closeness of the grain renders it fit for painters' palettes; the exceeding beauty of which, in the colour and veining of the wood, shows how judiciously it was applied in the temple of Solomon in the carvings and posts of the doors, as well as in the foundation for the gold work of the cherubims, within the Holy of Holies.

At a distance, the Olive tree resembles the gray willow in colour, though the hue may be a shade grayer.

The stems of old trees appear like three or four pollard willows congregated together; and the grayish brown bark, showing every here and there the very white and bleached wood beneath, wherever it has been exposed to the weather, adds to the likeness. But there the resemblance stops: the Olive is evergreen; and, instead of catkins, produces bunches of whitish flowers, succeeded by a fruit about the size of the sloe, which is more or less abundant, and larger or smaller, according to the soil and the season. The

crop seldom fails; when it does, it appears to be from some early blight, which makes it shed its flowers prematurely; and this it was subject to in ancient Judea, as well as in the comparatively neglected modern Olive yard.

The Olive affords a double harvest. The first in or about August; when the fully ripe fruit drops from the tree upon sheets or mats, spread under it for the purpose of receiving the rich produce undamaged. The second harvest is about October, or later in hilly places; when the tree is beat, and the fruit, as at the first, caught on sheets.

As to the ancient manner of expressing the oil from the fruit, there appear to have been three methods in use. The first, and probably most ancient, was to squeeze the fruit with the hand; and by this method, though there was much waste, yet the purest oil was produced, and this was set apart for religious use. The next method was treading the Olives as the grapes were trodden. As the prophet Micah says, "Thou shalt tread the Olives, but thou shalt not anoint thee with oil."* But we learn, from the second and third chapters of Joel,

* vi. 15.

that the Olive was sometimes pressed in an oil-press, and the oil received in vats.

Some Hebrew authors, and among the rest Maimonides, speak of oil mills in Judea; but it appears uncertain whether they were of such ancient date as to belong to the times before our era.

It appears that, besides the oil of Olives, there were several other kinds of oil in use in Judea. Oil of kiki pressed from the tick seed or castor oil nut, oil of sesamum, oil from the seeds of melons and cucumbers, and nut oil, were allowed to be burnt in the sanctuary, and in the private lamps on the Sabbath. There were, likewise, rape oil, fish oil, and purified tallow, for ordinary lights.

The Athenians so honoured the Olive, that they attributed its introduction to their tutelary divinity, and set its value above that of the horse, which they believed to be a divine gift also, received at the same time with the Olive.

I have mentioned elsewhere the tradition concerning the cultivation of the Olive in Epirus; whither it was said to be conveyed by a dove, who carried the first branch of it from Phœnicia to the temple of Jupiter, where the priests received and planted it.

The poets feign that after Jove's victory over the Titans, he crowned himself with Olive, as a symbol of continual peace; Hercules, whose labours were all undertaken for the sake of peace, was also crowned with Olive; it was feigned that Apollo, the patron of arts, protected it: and it was on all these accounts that a wreath of Olive was the crown at the Olympic games.

Nor was Greece the only country in which the Olive crown was awarded to victory. When Judith returned triumphant to Bethulia*, "They put a garland of Olive upon her and her maid that was with her, and she went before all the people in the dance, leading all the women: and all the men of Israel followed in their armour with garlands, and with songs in their mouths."

Such was the honour rendered to the Olive in the old world. The moderns continue to pay it equal homage. Common language and poetry have alike adopted the Olive, whether in figurative or plain speech, as significant of peace; and, truly, Olive oil poured upon agitated water, will produce a sudden

* Judith, xv. 13.

calm. How beautiful is Milton's "ready harbinger of Christ!"

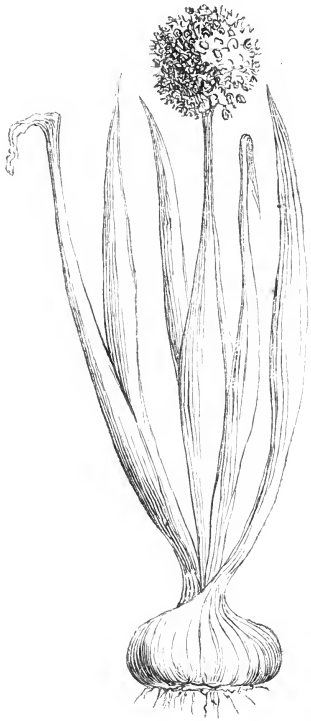
> "The meek-eyed Peace.
> She, crown'd with olive green, came softly sliding
> Down through the turning sphere,
> With turtle wing the amorous clouds dividing."

The Olive was carried by the Spanish missionaries to South America, where it thrives well; and, in Chile, the Olive oil and pickled olives of the country are, as in Spain, among the necessaries of life. With the tree they have also planted there the name, derived from the ancient Hebrew Zait; for the Spanish for oil is Azeite, and for the tree Azeitun.

This carrying of trees to new colonies, by those who never expect to return home, is a natural and delightful manner of procuring a friend in a lonely land. The palm tree of Abdurrhaman is a touching example; and who can be insensible to the account the Inca Garcilasso gives of the embraces that were exchanged among the seven Spanish warriors, on dividing among them the first five cherries that ripened in Peru?

May the planting of the Olive in that far land, by the first conquerors, be of good omen! May the

mother country and her colonies soon weave the Olive garlands for each other! And so, in the words of Scripture, shall the Olive do "honour to God, and to man."



ONION.

Allium Cepa,— Common Onion.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, LILACEA.

ONION.

Numbers, xi. 5.

The Onion is only mentioned in one passage of the book of Numbers, where the Israelites murmur against Moses for having brought them into the Desert, and taken them from a land where they had been enjoying all the vegetable luxuries of a highly cultivated country. In all warm climates, the Onion and its congeners seem to be particularly relished; but such as have only tasted the harsh acrid Onion of a northern garden can have no notion of how much reason the Israelites had to regret the large, nutritious, and delicate Onion of the shores of the Mediterranean. The modern Orientals think no dish complete without the Onion; their pillaus, whether savoury or sweet, are garnished with it; and it is no uncommon sauce to every dish, when fried with almonds or pistacea nuts, and mixed with dried fruit. I have fancied on receiving a dish dressed by the Arab master of a vessel, that the cookery, excellent in its way, and much to my taste in being what an Englishman

would call over-done, was very probably the same employed by the Pharaohs' chief cook, and that my mess probably differed from Benjamin's only in being too small. At any rate, it was redolent of Onions, in all the varieties of boiled, roasted, and fried.

In writing of the leek, I have mentioned the worship paid to that and the Onion in some towns of Egypt. It was at Pelusium, in the temple of a goddess who was supposed to have power to arrest the progress of the marsh fever to which the inhabitants were subject, that the Onion was honoured with incense and sacrifice. In all probability, this sacred Onion was the great sea squill, which was considered by the ancients as a most efficacious remedy for the marsh fever, and was nowhere produced in such abundance and such excellence as in the neighbourhood of Pelusium.

ONYCHA.

Styrax Benzoin,— Gum Benzoin Tree.

Linnæan class and order, DECANDRIA MONOGYNIA.
Natural order, STYRACEÆ.

ONYCHA.

Exod. xxx. 34. Ecclus. xxiv. 15.

This, from the context in both the above-cited passages, must have been some fragrant vegetable gum or resin. "Take to thee sweet spices, stacte, and Onycha, and galbanum," is the command in Exodus for preparing the perfume for the tabernacle. In Ecclesiasticus, we have "a pleasant odour like the best myrrh, as galbanum, and Onycha, and sweet storax."

Nevertheless, some authors have fancied that Onycha was the produce of a shell-fish, and so called from its shining something like a man's nail; and an old Dutch naturalist says that the covercle of a certain shell-fish of the class Murex, at Amboyna, serves for the basis of ten different Indian perfumes, and has that peculiar lustre like a nail.

But this seems very improbable, if only because the context implies a vegetable perfume. The Arabic version makes it Ladanum, but the Hebrew word translated Onycha is different from the name of that drug.

It has been suggested* that Gum Benzoin, which is not mentioned by any other name in Scripture, must be Onycha. Its fracture has exactly the lustre required by the name.

It is the most odoriferous of gums, and, in fact, rather resembles an inspissated balsam than a gum. Its peculiarly agreeable odour and pleasant taste arise from the principle it contains, called benzoic acid, which is found also in the balsam of Tolu, and in the Taca-mahac. The Benzoin tree belongs to the family of the Styrax, and is sometimes called Styrax Benzoin†, but by Hayne Benzoin officinale.

The tree is not large, nor, by description, does it appear to be a showy plant. The gum is a secretion from the bark, and is of great efficacy in healing wounds. It enters into the composition of many balsams and salves, particularly the well known Friar's balsam.

Such are the pretensions of the Benzoin to be looked upon as the true Onycha, which, from the text, as I have already said, must have been some fragrant

* By C. H., Esq.

† Dryander in the *Philosophical Transactions.*

vegetable gum, precious in itself, of foreign production, and ranking with stacte, and myrrh, and galbanum, and sweet storax; all which conditions are fulfilled by the Gum Benzoin.

CULTIVATED PALM.

PALM.

Phœnix Dactylifera,—Date Palm.

Linnæan class and order, Diœcia Hexandria.
Natural order, Palmæ.

PALM.

Exod. xv. 27.
Levit. xxiii. 40.
Numb. xxxiii. 9.
Deut. xxxiv. 3.
Judges, i. 16.; iii. 13.; iv. 5.
1 Kings, vi. 29. 32. 35.; vii. 36.
2 Chron. iii. 5.; xxviii. 15.
Nehemiah, viii. 15.
Psalm xcii. 12.
Song of Solomon, vii. 7, 8.
Jerem. x. 5.
Ezek. xl. 16. 22. 26. 31. 37.; xli. 1. 18, 19, 20. 25.
Joel, i. 12.
2 Esdras, ii. 45, 46.
Ecclus. xxiv. 14.; l. 12.
2 Maccabees, x. 7.
St. John, xii. 13.
Revelation, vii. 9.

The Date Palm is one of the very few, out of the large family of Palms, that does not require a tropical climate to bring it to perfection.

The Date Palm flourishes in Egypt, Nubia, and Morocco, Persia and Arabia, and even India. It grows in some favoured spots in Spain and Italy: in Spain it bears fruit yearly; and there is a tradition that, three centuries ago, the dates of a Palm tree ripened in Rome.

But the southern parts of Judea and Edom appear to have been, if not the native land of the Date Palm, at least the most favourable climate for it.

Two considerable places in the southern part of

Solomon's kingdom were named from this Palm. The most celebrated of these, the ruins of which are among the noblest relics of antiquity, was Tadmore or Tamar in the Desert, from the Hebrew name Tamar, a Palm, which the Greeks rightly translating called the place Palmyra. But now few, if any, Palms remain near the spot, to shelter or to refresh the weary traveller; for the water courses which fed the gardens of that magnificent city are broken up; the tanks which supplied the caravans of the merchants have been destroyed by war or by earthquakes; and, since the discovery of the passage by sea from Europe to India, the march of the caravans in that direction has ceased, there is no one to repair the stations of the Desert, to dress the gardens, or to renew the Palms.

The other place of note was Engaddi, of which little remains, except cells in the neighbouring rocks, either natural, or dug in the mountain side, where hermits and saints, both of ancient and modern date, have had their dwelling. Yet there, in the prosperous days of Israel, Solomon had his choice gardens and his vineyards of price; and the place was named Engaddi or Ain-Gaddi, the fountain of the

Palm.* We also find in Scripture Hazezon-Tamar, the castle of Palms, among the places taken by Chederlaomer from the Amorites, in the time of Abraham; and Baal-Tamar and Baal-Gad among the fortresses of Judea.

From the earliest times, the Palm branch has been looked upon as the emblem of victory. The Palm is the herald of triumph, whether in sacred or profane history. Its long life, its perpetual verdure, the assurance it affords to the yet distant wayfarer in the Desert, that springs of water will be found wherever it rears its graceful head, single it out from all the growth of the forest. High-raised upon its pillar-like trunk, the head of the Palm throws out its equal fronds, light as the feather of the ostrich, yet strong to resist the storms from heaven; and, in their immediate shelter, burst forth those marvellous sheaths which soon disclose the abundant fruit that nourishes the Arab and his camels, and leaves him

* Gad, as well as Tamar, is a name of the Palm. The fertility of Engaddi is beautifully alluded to by Crashaw. He says that, at the birth of Christ,—

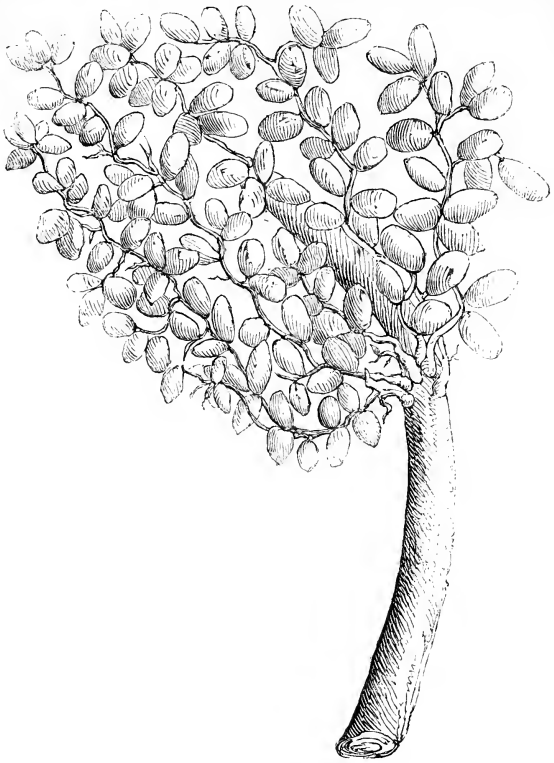
"Fair Engaddi's fountains
With manna, milk, and balm, new broach'd the mountains."

ample superfluity to sell, or barter for the goods of the East or of the West. If the bark is excoriated, a fluid little less sweet than honey exudes from it, and the lymph flowing from the wounded leaf produces a wholesome wine.

Pliny says that the ancient Orientals boasted of three hundred and sixty uses to which the Palm tree and its products were applied. It would be too curious to examine into the whole of these, but not uninstructive to consider the principal purposes to which the Date Palm was applied.

The fruit of the Date Palm is the first and most important of its products. Each tree yields, according to Dr. Shaw, from three to four hundred pounds' weight of dates every year, from the time it has reached the age of thirty years, until it counts a century, after which period it falls off in fertility. Whether fresh or dry, there is no fruit more nutritious than the date, and certainly none on which so many depend for the greater part of their sustenance. The stones, hard and dry as they may appear, are ground into a kind of coarse meal, on which the goats and camels of the Arabs feed with greediness; and, in the longest march across the Desert, neither man

nor beast require other food, if they have a little water or camel's milk to allay their thirst.



BUNCH OF DATES.

The great midrib of the leaf of the Palm serves not only the wandering Arabs to enclose their flocks when encamped, but the Fellah or Egyptian husband-

man to prop the walls of his hut, to fence in his fields, and when decayed to maintain his household fire. Sometimes the soft winged part of the leaves being left on the midrib, they are woven into a neat and comfortable lining to the hut: the same soft part is converted into mats, baskets, pouches, beds, nets, cages for poultry, and more domestic articles than I can name. The fibrous network surrounding the bottom of the fruit and flower sheaths is twisted into excellent cordage, and is not unfrequently woven into bags fit for packing goods; finally, the poor Egyptian thatches his hut with Palm leaves; and such of them as die naturally, from the neglect of the farmers of the land, serve for excellent fuel.

The trunk of the Palm is very durable, and makes excellent water-pipes; because it resists the attacks of the insects of a warm climate, even those of the white ant. It is hard to work, and boasts of no beauty; but in Egypt, where timber is scarce, the Fellahs make their doors of it.

I have already mentioned the sugar or honey drawn from the trunk of the Palm, and the wine or strong drink obtained from the cut foot-stalks of the leaves; but there is, according to Kæmpfer, another

kind of wine, obtained by pressing the fruit, which finds a good market from the traders of the caravans.

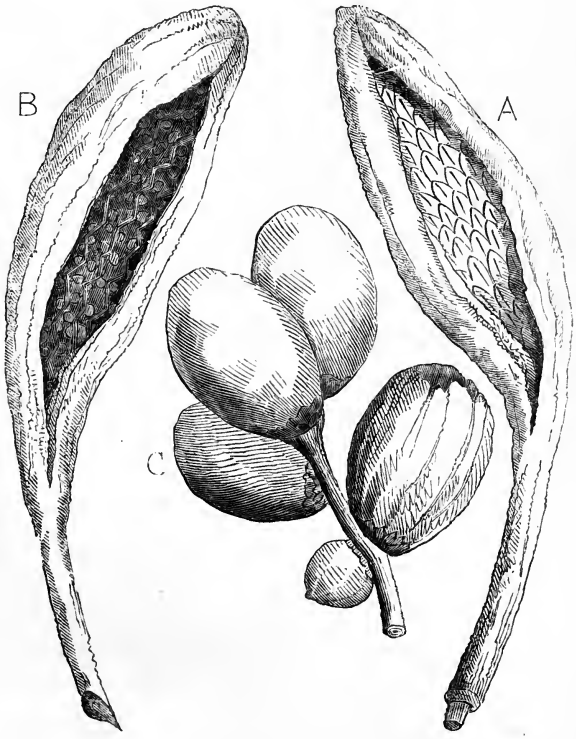
Although, as I have stated above, the Date Palm is at perfection at the age of a century, still, in favourable situations, it continues in health for fifty years more. It is increased chiefly from suckers, which spring freely from the parent root; and, wherever an ancient Palm has died or has been accidentally burnt down, two or three young trees spring up near the spot. Hence, probably, its name Phœnix, in allusion to the fabulous Arabian bird.*

The Palms differ from every tree of the forest in this, that from their seedling state to old age they never increase in bulk, but raise their columnar forms without branch†, or bend, or contortion. Upward they grow, shooting their young foliage from within, as annually the withered fronds beneath decay, leaving but the traces of their being, in circles or reticular marks on the external surface in many species; while in the Date Palm the stools of the decayed leaves form projections, which serve as steps

* Phœnicia is said to have been so named from the multitude of its Phœnices, or Date Palms.

† Excepting the Doom, or many-headed Palm.

by which man may ascend to possess himself of the treasury of fruit that hangs in golden clusters from beneath the wide-spreading fronds, or to tap the tree for its invigorating wine, or, finally, to carry on those modes of culture which are necessary to render the Date Palm fruitful.



FLOWER OF THE DATE PALM.

A, Male flower. B, Female flower. C, Fruit.

I believe the oldest notice of the necessity of this kind of culture for the Palm is to be found in Herodotus's account of Assyria: but the most complete explanation of the methods of cultivating the date, and gathering the harvest, is to be found in Kæmpfer's *Amœnitates Exoticæ.*

So important is the Date Palm to the Arabs, that they have fancifully invested it with a dignity approaching to that of man, and endowed it with the powers of thought and of language. They fable that the young trees woo each other with the tenderness of human love, and that truly virtuous adepts in the knowledge of the secrets of nature may, with time and study, attain to the knowledge of this language, and understand the morals and the wisdom of these vegetable sages. The last of such favoured adepts was the learned Doctor Abraham Gaon, who died about the year 1540.

The Mahommedan traditions have handed down many marvels concerning the Palm; among the rest is one which must have been borrowed from one of the apocryphal gospels of the Infancy of Christ. The story is as follows. When the Virgin Mary was on her way towards Jerusalem to be registered, she

fainted and grew sick at the foot of a Palm, so aged that the crown was dead, and there remained nothing but the bare trunk. She had no sooner sat down at its root, however, than a clear spring of water welled out from beneath the withered Palm; the branches shot fresh and vigorous from the blackened stem; the fruit budded, formed, and ripened; the whole graceful plant bowed down towards her, and celestial voices were heard, saying, "Drink, eat, and refresh thine eyes." Thus was the virgin mother comforted, and there did she bear her divine son.

Whoever was the author of this fable must have been well acquainted with the Greek story of the flight of Latona to Delos, where she gave birth to Apollo and Diana under a Palm, whence that tree was consecrated to Diana. It is said that Theseus first carried the Palm to Athens from Delos, when he returned in triumph from his victory over the Minotaur. But the mainland of Greece never was favourable to the Palm, though several of the Greek islands were adorned with it.

Even in the South of Italy they have always been rare, though they are not scarce in some parts of Sicily. Near Genoa, there is a narrow, warm, sandy

valley, full of Palms, but they are diminutive in growth, and unfruitful; being cultivated only for the sake of the leaves, which are annually sent to the Pope's chapel at Rome, when they are blessed, and distributed to the cardinals and other dignitaries, in sign of the triumph of the church.

The first Palm seen in Spain was planted by Abdulrahman I., the Moorish king of Cordova, in the garden of a palace called the Rusafa, which he built near his capital.* There he had collected many beautiful trees and flowers from every land, and among them the Palm of his native country. A beautiful elegy addressed by him to this Palm became a popular song, and spread even into Christian Spain. It is too long for insertion here, but I cannot refrain from copying the last stanza. †

"To *thee* of my loved native land
No fond remembrance clings;
I cannot cease to think, and still
The tear unbidden springs."

---

* About A.D. 750.

† The whole will be found in my short *History of Spain*. The elegy was versified by one, now no more, whose talents of various kinds were only inferior to her qualities and virtues, the late Mrs. Sullivan.

WILD PALM.

Since the time of the Moorish king, Palm trees have been planted in various parts of Spain, for the purposes of the church. Those at Malaga have thriven as if the place were native to them, and annually produce fruit; but neither the Palms of Spain nor Mauritania, Libya nor Egypt, Arabia nor Persia,

could anciently vie with the Palms of Palestine, in fruitfulness or beauty.

Celsius was so enamoured of the Palm, that he imagines, wherever the promised land is spoken of as a land flowing with milk and honey, that the jagree or sugar juice of the Palm is intended, and gravely assures us that it is equally good. I am sure that, if the learned Scandinavian had ever tasted it, he would never have done such injustice to that delicious natural confection, honey, which furnished his Gothic ancestors with their mead and metheglin; for the truth is, that jagree very much resembles treacle. And, then, he seems to have forgotten the quantity of wax that, from the most ancient times, had been exported from Arabia, Edom, and Palestine.

The first mention of the Palm, in the English Bible, is in the description of the station Elim, where there were twelve wells, and threescore and ten Palm trees; and where the people arrived from Marah where the waters were bitter, and to which they had come after three days' journey along the arid and sandy shore of the Red Sea. No wonder they counted the wells of sweet water, and the sheltering Palms of Elim! In the further wanderings in the wilderness,

we find frequent notice of the wells and the Palm trees.

In the regulations for the making the booths for the feast of Tabernacles, the Palm is, for the second time, introduced in the books of Moses*: and the third and last is in the account, given in Deuteronomy, of the great lawgiver's vision from Mount Pisgah; whence beholding the promised land with his eyes, though his feet might never enter it, he saw "all the land, and the plain of the valley of Jericho, the city of Palm trees."†

In the book of Judges we learn that Deborah, the only woman who appears to have executed the high office of judge in Israel, sat to judge the people under a Palm tree; as in other nations, even in remote Britain and Gaul, the judgement seat was under some remarkable tree, such as the teil tree or the oak.

Our version says that Deborah dwelt under the Palm tree of Deborah, though others only say that she sat to judge there. But there is no contradiction in this. The modest dwelling of the "mother in

* Repeated Nehemiah, viii. 15.

† Repeated 2 Chron. xxviii. 15.

Israel" might be built under the shadow of the Palm: and she would naturally, according to most ancient custom, receive the people whom she judged under the tree; even as Abraham received the angels, not in his tent, but under the tree that overshadowed it. It was from the foot of her Palm tree that Deborah summoned the warrior Barak, to deliver the people from the tyranny of Jabin, king of Canaan. But this is not the place in which to pursue the triumphant history of the judge and prophetess, nor to copy her song of glory; a glory that procured forty years of peace and its blessings for her people.*

How beautifully do the royal poets, David and Solomon, introduce the Palm into their divine songs! David says: "The righteous shall flourish like a Palm tree. They shall bring forth fruit in their old age."

* One would imagine that some person well versed in the Jewish history had suggested to Vespasian the reverse of his well-known medals and coins, struck on the capture of Jerusalem by Titus. It represents generally the figure of Jerusalem, as a veiled woman sitting weeping under a Palm tree, with a captive Jew behind her, and beyond the tree. Some of the coins bear a Roman soldier, and others a military trophy, instead of the captive. (See Addison's *Dialogues on Medals.*) That from which the wood-cut at the end of this little dissertation is taken is one of the most elegant among the designs. It was found lately in excavating the ground for an approach to New London Bridge.

By Solomon the graces and beauties of Christ are compared with the loveliness and fruitfulness of the Palm; and this emblem he never lost sight of, for he introduced the Palm among the carvings of the Temple between the cherubim, and in the Holy of Holies. In Ezekiel's magnificent vision of the second Temple, the same disposition of Palm trees as ornaments is repeated.

In the sad lament of the prophet Joel, over the condition into which Israel had fallen in his days, he says: "The Palm tree also and the apple tree, even all the trees of the field are withered, because joy is withered away from the sons of man."

Of the Palm as the sign of triumph, we read in the excellent history of the Maccabees. When Judas Maccabeus had reconquered the Temple, and had cleansed it from the pollutions of the heathen, the people went in triumph to take possession; "and they bore in their hands branches and fair boughs, and Palms also, and sang psalms unto him that had given them good success:" and the procession was repeated every year, in remembrance of it.

So, when a greater than Maccabeus rode up to Jerusalem to purify, once and for ever, the holy

places, "The people took Palm branches, and went forth to meet him, crying Hosannah."

As long as the Temple continued to exist, the feast of the purification was held; and, as the ceremonial of the early Christian church was regulated by the Jewish ritual, as nearly as was consistent with the new faith, the annual presentation of Palms at the altar was required, or at least practised, on the Sunday before Easter, in memory of the entry of Christ into Jerusalem. But the glory of the Palm is yet to come.

When Esdras saw his glorious vision of the world hereafter, he asked the angel concerning those in white robes who had been crowned. He answered: "These be they that have put off the mortal clothing and put on the immortal, and have confessed the name of God; now they are crowned and receive Palms." And this revelation to Esdras is the prototype of the more celestial vision of St. John's Apocalypse, wherein he saw that "a great multitude, whom no man could number, of all nations, and kindred, and people, and tongues, stood before the throne, and before the Lamb, clothed with white robes, and Palms in their hands."

Then to the wondering seer the guiding angel

said: "These are they which have come out of great tribulation, and have washed their robes, and made them white in the blood of the Lamb. Therefore are they before the throne of God, and serve him night and day in his temple, and he that sitteth on the throne shall dwell among them. And they shall hunger no more, neither shall they thirst any more, neither shall the sun light on them, nor any heat. For the Lord, which is in the midst of the throne, shall feed them, and shall lead them unto living fountains of water; and God shall wipe away all tears from their eyes."

COIN OF VESPASIAN.

PANNAG.

Panax Quinquefolium,—Ginseng. Pannag.

Linnæan class and order, Polygamia Diœcia.
Natural order, Araliæ.

PANNAG.

Ezekiel, xxvii. 17.

Probably Panax Quinquefolium, or Ginseng. That there are various opinions, ancient as well as modern, concerning the meaning of the word *Panag*, the following extract from a letter of Dr. Hurwitz will show:—

"*Pannag*, Ezek. xxvii. 17., is considered by some as the name of a place; by others, as the name of a delicious sort of pastry. This I think the most probable, as the word *delicately*, Prov. xxix. 21., which appears to be of the same root, expresses also tenderness and delight, and is frequently used in Rabbinical Hebrew in these senses. Those authors who render *Pannag* by Balsam, forget that it is already mentioned in the same verse."

It may appear bold, after such an opinion, to propose to consider Pannag as the root of the Panax; but I have the less scruple, because I find that some of the learned have supposed the word might mean

some vegetable such as millet or panic-seed, others balm; and that one has suggested the Panax.*

The Panax was considered by the ancient physicians as a medicine so powerful and efficacious for the cure of a great variety of distempers, that the word Panacea was derived from it. Now this is precisely the character the Chinese from time immemorial have attributed to their Ginseng, which is the root of the Panax Quinquefolium. This drug was, and is, produced in great quantities throughout China and Chinese Tartary, where it is probable that the method of curing it renders it more efficacious than it is held to be by modern European physicians; but, as it appears from Pliny to have been as much valued by the ancients as it now is by the Chinese, it would naturally find its way to the market of Tyre, as easily as camphor, lign aloes, or any other production of the far East.

Some species of Panax are found in North Ame-

* Luther and the Danish Bible call it Balsam; the Dutch has Panag; the Spanish Pannag; Deodati's Italian version Fannag; and, in the French Geneva Bible, Pannag is a proper name: the greater number thus leaving it in its original obscurity.

Hiller is the best, if not the only, authority for supposing it to be the Panax of the ancients.

rica; but they appear to be far inferior, in effect and quality, to the Panax of the East; and the kind of Panax used green by the ancient Italians seems to have been a potherb.

There is a root well known to the Caffres and Hottentots, who do not like to show the plant, lest they should be robbed of it: this root is said to resemble the Ginseng in appearance. These people use it not only to chew, but to put into their barley drink, to hasten the fermentation; for the Caffres, like true savages, have scarcely patience to wait for the natural progress of their brewing, but begin drinking the moment the liquor begins to change its taste and hue.

I do not know that the plant producing the Hottentot root has ever been seen by a botanist competent to decide on its genus. Kolben, in his *Travels*, speaks of its very extraordinary effects on the Hottentots; but he appears to have seen only the root, which, he says, is like Ginseng.

The Ginseng, or Panax, of Asia is an agreeable root to chew, as the Egyptians do the sugar-cane; and, excepting that it is warmer, and more pungent, it resembles the liquorice root, with whose effects

those of the North American species of Panax appear to be identical.

Wherever the Panax has been found, it has been considered as salutary, precious, and delicious; thus answering to the Rabbinical explanation of the word *Pannag:* and such a drug might well be classed with the honey, oil, and balsam, mentioned in the same verse, and with them find its way to the markets of Tyre.*

* In a Chinese novel called *The Pleasing History*, translated above half a century ago by Mr. Davis, the Ginseng figures as an antidote to all poison, and as a restorative so efficacious as to renew the strength, and in a few days the *embonpoint* so essential to male beauty in China, after the frame had been attenuated by the evil practices of a hired poisoner.

PAPER REED.

Cyperus Papyrus,—Paper Reed.

Linnæan class and order, TETRANDRIA MONOGYNIA.
Natural order, CYPERACEÆ.

PAPER REED.

Isaiah, xix. 7.

Our version of the Bible only names the Paper Reed once, and the word *Aroth*, so translated, means, according to Celsius, any grassy reed; while the Hebrew name for Papyrus is really *Gome*, which our translators have generally rendered bulrush, as in Exodus, c. ii. v. 3.; Job, c. viii. v. 11.; Isaiah, c. xviii. v. 2., and c. xxxv. v. 7. Hence it would follow that Moses was laid in an ark of Papyrus, not bulrushes, and that the Ethiopians made their ships and boats of the same.

It is almost certain that Ethiopia is the native country of the Papyrus, and that it naturally descended the Nile into Egypt. From the most ancient times the Egyptians made cordage of the Paper Reed; for we find in the *Odyssey*, that, on an occasion of great necessity, Ulysses made use of a rope of Egyptian reed.*

The waving feather-like tops of the full grown Pa-

* Odyssey, b. xxi. l. 46. of Cowper's translation.

pyrus were used to crown the statues of the goddesses in many temples; the upright stem was used in the construction of light vessels. When macerated in water or wet sand, the fibres served for cordage, and sail-cloth was occasionally woven of it. The solid part near the root was converted into soles for the sandals of the priests, cups and various toys, the more valuable on account of the scarcity of wood in Egypt; but the chief and most important use of the Papyrus was as a material for writing on.

Biblos, the ancient Egyptian word for the plant, is preserved in the name for the most venerable of books, the Bible.

The common name, Papyrus, comes to us in the word paper, the original manufacture of which is described as follows. The reed was cut into lengths, each sufficient for a page, and then carefully peeled at its whole length as far inward towards the core as possible, so as to have a tolerably wide strip.*

* The beautiful substance called rice paper, of which artificial flowers are sometimes made, and on which I have seen moths and butterflies exquisitely painted, is cut in the same manner, from the pith of a rush growing plentifully in the waters of the Ganges. The fishermen on the Hoogly tie bundles of these rushes together, and use them as floats for their fishing-nets.

Several of these strips were laid together to make the breadth of the page; these were then daubed over, either with simple gum, animal glue, or flour paste, or, as some authors say, simply with the slimy water of the Nile. But this last has been found on experiment to be incapable of serving the purpose; and we know from Pliny that the three other substances were used in the manufacture of paper, of books, and of their bindings. The first layer of Papyrus being dry, a second was placed transversely upon it, that the fibres might cross each other, like the threads of woven cloth. The sheets were then beaten, and a strong pressure applied to render them smooth.

This description, which is chiefly, if not wholly, from Pliny, is not quite perfect as it appears; because Bruce in following it failed, though he afterwards succeeded by some other process in making a tolerable sheet of reed paper.

It is singular that a fit of spleen, or rather perhaps commercial jealousy, on the part of an Egyptian monarch, which caused him to prohibit the exportation of paper, should have occasioned the invention of parchment at Pergamus by Attalus its king. And I rather remark this, because, at no great distance from

Attalus's kingdom, the Papyrus grew in the whole country from Paneas, the source of the Jordan, to the lake of Tiberias, according to ancient writers; and the modern botanist Guiland found it at the confluence of the Euphrates and the Tigris.*

As Pliny does not say that it grew in Italy or Sicily, it must have been introduced into those countries since his time. I saw it on the banks of the Anapus near Syracuse; and Sir Joseph Banks possessed some paper made of the Papyrus growing in the lake of Thrasymene.†

The appearance of the Papyrus, growing in clusters and with other reeds, is very graceful, the top resembling an elegant plume; but the want of lower leaves takes from its beauty, when growing singly. It reaches the height of fourteen feet in favourable

* The invention of Attalus could only have extended to the method of preparing skins, and stiffening and smoothing them; because long before his time skins were used for writing on, as we learn from Herodotus, who says, in speaking of the introduction of letters into Greece by the Phœnicians, that the Ionians, who were the Greeks most contiguous to the Phœnicians, learned those letters, and by an ancient custom called their books *Dipthera* or skins, because, at a time when the plant Biblos was scarce, they used instead of it the skins of sheep and goats. Skins of small animals were, in like manner, used by the Mexicans at the period of the Spanish conquest.

† Now the lake of Perugia.

situations; but Bruce says it is seldom found so tall. The roots and tender shoots appear to have been used as food by the ancient Egyptians; but those who speak of its being chewed as a luxury, when raw, doubtless mistook the sugar-cane for it, as the stem is neither juicy nor agreeable in taste.

Of the various substances used for writing upon among ancient nations, the most ingeniously contrived was certainly the sheets of Papyrus, which have been succeeded by modern paper, the best of all.* The most ancient Italians appear, like some of the East Indian nations, to have used linen cloth so prepared as to retain the marks of the pen. There are some ancient books written on the folds of palm leaves. Tablets of different kinds of wood, particularly box wood†, and the bark of various trees, have also been employed for the same purpose.

This latter substance has given the Latin word *liber*,

* Lucan says that

> "Memphis, ere the reedy leaf was known,
> Engraved her precepts and her arts in stone."

Most nations have occasionally used stone where they wished to perpetuate their writing: the priority of stone or paper, however, is a question for the antiquary, but not for the herbalist.

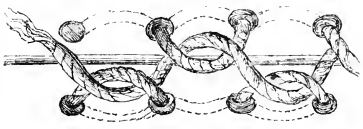
† Esdras, xiv. 24.

and consequently the name for book in the southern languages of Europe ; while we Gothic nations derive our *book* from the beech tree, which was doubtless cut into thin tablets, whence a verse is often called a stave or staff, as if each verse of a legend or song had been written on a separate tablet.

With regard to Egyptian rope, the fibres at the bottom of the palm leaves furnish a very large proportion of it; but it was probably the finer cord twisted from the Papyrus, that was employed in the curious lacing of those mummy cases, where the body was introduced after the case had been ornamented. This, it may be supposed, was the ordinary practice; for only the very rich could afford the expensive method of embalming, which would allow time to have cases ornamented expressly for their use. Poorer persons bought their coffins or cases ready made; and hence the convenience of the opening in the back of the case, which might be laced up securely at any period.*

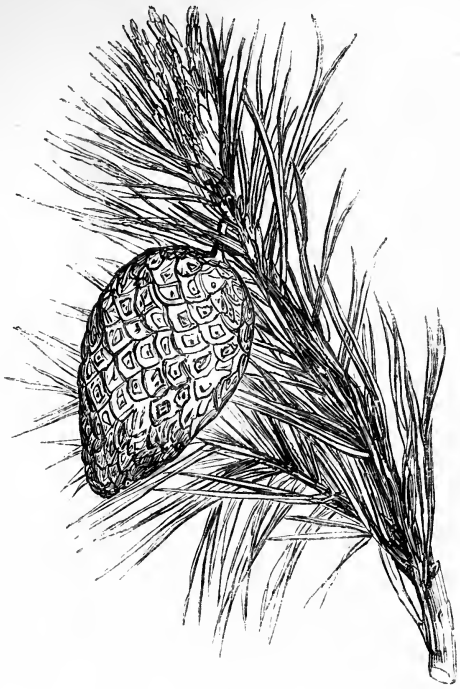
* The following extract from a letter addressed to me by Mr. Clift, the Conservator of the College of Surgeons, will explain the method of lacing the mummy cases. "The (inner) case is composed of at least ten or a dozen layers of linen, of the same quality as that which envelopes the

body. These laminæ are very firmly cemented together by a material, apparently glue and lime, or plaster. This case is originally moulded upon a rude mass or mould of clay and straw, of the size and form of the swathed body intended to be afterwards contained in it; and, when sufficiently dry to retain its form, the clay and straw are scraped or scooped out from the back, which is left open, or rather apparently cut open, for that purpose, and then the body is introduced, and the edges of the aperture brought together by a very simple and ingenious method of drum-like bracing; thus,



MUMMY-LACING.

and the seam and lining covered afterwards with a strip of cloth, glued or cemented over them."



PINE.

1. *Pinus sylvestris,— Common Swiss Pine.*
2. *Pinus sativa,— Larger female Pine.*
3. *Pinus Cembra,— Smaller, or wild, female Pine.*

Linnæan class and order, MONŒCIA MONADELPHIA.
Natural order, CONIFERÆ.

PINE.

Nehemiah, viii. 15. Isaiah, xli. 19.; lx. 13.

The Arabian botanists give these three Pines, as the trees properly meant by both the Hebrew and Arab word *Æres*, or *Ers*. The Rabbins use the plural *Ærasim*, for all mountain and forest trees, and enumerate seventy species. The great beauty of the Pine is compared with that of the cedar; and, like it, the Pine grows luxuriantly on Mount Lebanon.

From the larger female Pine, sometimes called the Siberian Stone Pine, nuts nearly as good as those of the sea-side Pine of Italy are procured.*

The great family of Pines is distributed all over the earth. Even Africa has its cone-bearing thuja, which is nearly akin to it, so far south as the temple of Ammon; and the forests of Mount Atlas have their Pines, firs, and larches. But real Pines and firs clothe not only the mountains of Europe and Northern Asia and Africa, but are found both in

* It is perhaps unnecessary to say that what are called Pine nuts are only the seeds, either shed naturally from the fully ripe cone, or forced out by laying the cone near a fire till it bursts.

South America, and in the great newly discovered islands of the Pacific.

The timber afforded by the Genus Pinus is, upon the whole, the most useful of any to man. It is easily wrought, close-grained, tough, and light. Containing much oil and resin, it is less subject to the attacks of insects than most other kinds of wood; and, the boles of the trees being tall and straight, beams, rafters, and planks, of the best kind for buildings on land or ships on the sea, are hewn from them.

The wood of all the Pines, including the firs and larches, is capable of being split into very thin laminæ. Hence its utility for domestic purposes, and in manufactures of various kinds, especially that of musical instruments. The common Swiss Pine, the tree mentioned in my texts, furnishes the modern musical instrument makers with the most important of their materials. The backs of violins and guitars, and all instruments resembling them, are usually made of maple, or some other light ornamental wood; but the bellies, or sound-boards, are invariably of Swiss deal*, and so are the sound-boards of all the best

* Deal is a Gothic word, meaning a division. We have the verb *to deal*, that is, *to divide*, *to deal* out provisions, *to deal* cards, &c. A deal,

pianofortes. It is therefore probable that the harps and psalteries made of fir-wood, mentioned in the second book of Samuel, were really framed of the Pinus sylvestris.

Celsius is of opinion, that, where the oil tree is mentioned by Isaiah (xli. 19.), some kind of Pine is intended. The original calls it the fat, or unctuous, tree; and he supposes that such a designation best suits the Pines and firs, as they produce rosin, pitch, tar, and other unctuous substances.* Pitch is mentioned in the account of the building of the ark, Genesis, c. vi. v. 14.; also in the description of the ark of bulrushes, wherein Moses was laid, Exodus, ii. 3. Rosin and pitch are both mentioned in the Song of the Three Holy Children, and pitch in the History of Bel and the Dragon. Thus it appears that, from the earliest times, the precious products of the Pine have been known and used, as well as the timber itself.

The first mention, in our version of the Bible, of

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therefore, is a division of the trunk of any tree of the Pine kind; for to that kind is the word restricted.

* He quotes here, as elsewhere, many authorities, but his own is worth them all.

the Pine, as separate from the fir, is in the book of Nehemiah, when the people returning from the Babylonian captivity are commanded to keep the feast of Tabernacles; and, in order to erect their booths, to "Go forth unto the mount, and fetch olive branches, and Pine branches, and myrtle branches, and palm branches, and branches of thick trees."

Isaiah, whose sublime poetry is always embellished by images fresh from nature, says: "I will plant in the wilderness the cedar, the shittah tree, and the myrtle, and the oil tree; I will set in the desert the fir tree, and the Pine, and the box tree together." And again: "The glory of Lebanon shall come unto thee, the fir tree, the Pine tree, and the box together, to beautify the place of my sanctuary."

PLANE TREE.

Platanus Orientalis,— Oriental Plane.

Linnæan class and order, Monœcia Polyandria.
Natural order, Platanaceæ.

PLANE TREE.

Gen. xxx. 37. Ezekiel, xxxi. 8. Ecclus. xxiv. 14.

Our own version reads chesnut in Genesis and Ezekiel instead of Plane, which, according to Celsius, who cites various authorities, is the real meaning of *Armon*, the Hebrew word in these texts. Some versions have substituted beech, and some maple; but these are equally erroneous with chesnut.

In the 30th chapter of Genesis, Jacob says, he took wands of the willow, and the green poplar, and the chesnut, to lay in the water courses for the cattle. Now the chesnut delights in a dry hilly situation, while the willow and poplar are of the low ground, and the Plane tree, like them, loves to grow by the water. Hence the Plane tree is mentioned in this place with the utmost propriety.

The passage in Ezekiel where the Plane is named is in the description of the kingdom of Assyria, while still enjoying the favour of God. "The fir trees were not like his boughs, and the Plane trees were not like

his branches; nor any tree in the garden of God was like unto him for beauty."

There is perhaps no tree more beautiful than the Oriental Plane, even when transplanted to our northern regions.* The smoothness of the trunk, the elegance of its growth, and the beautiful hue of its broad palmate leaves, casting a deep, but not a gloomy, shadow around, justly entitle it to the preference which the Syrians have from time immemorial given it, as the principal ornament of their gardens.

In our time, the luxurious Persian loves to spread his carpet by the pool or stream overshadowed by the Plane tree; and to sit listening there to the song of the minstrel, or gathering instruction from the wisdom of the moral story-teller.

Even the Romans, when their conquests had extended to "far Euphrates' bank" partook of the native admiration and love of the Plane tree. Pliny

* We owe the introduction of the Oriental Plane into England to Tradescant, who had seven fine growing plants at the time when the herbalist Gerard had sent his servant in a Levant ship to collect seeds and plants. This servant, among other seeds, brought those of two magnificent Planes which adorned the entrance to the harbour of Lepanto. It is believed that at least two of Tradescant's trees were planted in the Earl of Essex's garden at Nine Elms.

tells us of a Roman consul, who, being governor of the Asiatic provinces, chose an ancient Plane tree in Lycia, which overhung a fountain of pure water, sometimes for his banqueting-room, and sometimes for his bed-chamber. The trunk was hollow with age, while its numerous branches, like so many young trees, overshadowed the neighbouring meadow; and he loved to hear the rain dropping upon the leaves above, while he sat securely sheltered in the heart of the tree.*

Palestine, Syria, and Asia Minor still abound in Plane trees: but they no longer adorn the gardens of Jerusalem; for there the pools are dried up and the streams are cut off, and the Platanus must now be sought in the distant valleys, where the well heads are yet moist.

The new world can boast of a Platanus almost as beautiful as that of the East. The timber of all the Planes is valuable, and near the root extremely beautiful, scarcely yielding in variety of tints to the bird's

* Pliny, b. xii. c. 1. In this book there are accounts of a variety of very aged trees as remarkable as this, well worth reading for those who love the forests.

eye maple, to which it is even preferable for frames for prints, and some other ornamental purposes.

The son of Sirach justly appreciated the Plane tree, when he put into the mouth of Wisdom, declaring her own excellency, the following beautiful comparison: "I grew up as a Plane tree by the water."*

One might also fancy he described the trees of that venerable avenue on the banks of the Ilyssus, set with Plane trees and skirted with olives, which formed

> "Plato's retirement, where the Attic bird
> Trills her thick-warbled notes the summer long."

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* Ecclus. xxiv. 14.

POMEGRANATE.

Punica Granatum,— Pomegranate.

Linnæan class and order, Icosandria Monogynia.
Natural order, Myrtaceæ.

POMEGRANATE.

Exod. xxviii. 33, 34.; xxxix. 24.
Numb. xiii. 23.; xx, 5.
Deut. viii. 8.
1 Sam. xiv. 2.
1 Kings, vii. 18. 20. 42.
2 Kings, v. 18.; xxv. 17.
2 Chron. iii. 16.; iv. 13.
Nehemiah, xi. 29.
Song of Solomon, iv. 3. 13.; vi. 7.; vii. 12.; viii. 2.
Jeremiah, lii. 22, 23.
Joel, i. 12.
Haggai, ii. 19.
Zech. xiv. 10.
Ecclus. xlv. 9.

The name Punica points out the country from which the Romans, and consequently all the Western world, first received the Pomegranate. Pliny says that the North of Africa, and especially the neighbourhood of Carthage, were celebrated for three kinds of Pomegranate, the red, the white, and a larger kind much more astringent than either, the grains of which were little used except in medicine; but the rind was much preferred to any other substance, for tanning and preparing the finer kinds of leather. The manufacture of leather, if it may be so called, was, a few ages after Pliny's time, introduced by the Moors from Africa into Spain; and the great quantity of fine leather prepared at Cordova, and which was thence

called Cordovan, was sufficient to supply all Europe.* The Morocco leather still retains its superiority, especially for binding books; though Spain, after the expulsion of the Moors, no longer vied with the North of Africa in its manufacture.

The Pomegranate was certainly cultivated in Egypt before the exode of the children of Israel; for in the wilderness of Zin, when the people murmured against Moses, they numbered the want of the Pomegranates of Egypt as among the causes of their discontent. Yet Caleb had brought to Eshcol, from the land of promise, fair fruits, grapes, figs, and Pomegranates, when he went to examine the country.†

But the Pomegranate is not confined to Africa as its native soil; Syria, Persia, and India possess it in a wild state. The Pomegranate forests of Mazenderan furnish great part of the dried seeds, so favourite a medicine in the East; the rinds being, as elsewhere, applied to the tanning of leather. On the river Cabul, just under the Snowy Mountains, lie the famous

* Hence the old English word Cordwainer, or worker in Cordovan, for a boot and shoe maker.

† Besides the three kinds of Pomegranate mentioned by Pliny, Hasselquist found a small barren kind in Egypt.

gardens of Balabugh, where the Pomegranates are without seeds: and on the Himalaya Mountains there is a small wild sort whose root is especially esteemed in medicine, and which, on account of its great astringency, is much sought after by the dyer and tanner.*

Whoever has seen the Pomegranate in a favourable soil and climate, whether as a single shrub or grouped many together, has seen one of the most beautiful of green trees; its spiry shape and thick tufted foliage of vigorous green, each growing shoot shaded into tenderer verdure and bordered with crimson, and adorned with the loveliest flowers. Filmy petals of scarlet lustre are put forth from the solid crimson cup; and the ripe fruit, of richest hue and most admirable shape, all proclaim the goodness of that Almighty hand, which

> "Does in the Pomegranate close
> Jewels more rich than Ormus shows."†

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* See Royle's *Himalaya Mountains*, p. vi.; and also Dr. Flemming on *Indian Medicinal Plants and Shrubs*.

† I am tempted to copy the whole of Andrew Marvel's "Pilgrim Fathers;" it would require but little change to render it a description of Palestine:—

This charming fruit was most prosperous in ancient Jewry, and grew to such a height, that we are told,

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" THE PILGRIM FATHERS.

" Where the remote Bermudas ride
In the ocean's bosom, unespied;
From a small boat that row'd along,
The list'ning winds received this song.

'What should we do but sing his praise,
That led us through the watery maze
Unto an isle so long unknown,
And yet far kinder than our own?
Where he the huge sea monsters wracks
That lift the deep upon their backs,
He lands us on a grassy stage,
Safe from the storms and prelates' rage.
He gave us this eternal spring,
Which here enamels every thing;
And sends the fowls to us in care,
On daily visits through the air.
He hangs in shades the orange bright,
Like golden lamps in a green night;
And does in the Pomegranate close
Jewels more rich than Ormus shows.
He makes the figs our mouths to meet,
And throws the melons at our feet:
But apples plants of such a price,
No tree could ever bear them twice.
With cedars, chosen by his hand
From Lebanon, he stores the land;
And makes the hollow seas that roar
Proclaim the ambergris on shore.
He cast (of which we rather boast)
The Gospel's peace upon our coast,

in the first book of Samuel, that Saul was in his tent under a Pomegranate tree, at the time when his son Jonathan, with only his armour-bearer, heedless of the shock of an earthquake, made his gallant and successful attack on the Philistine fortress of Mickmash.

There is scarcely a part of the Pomegranate tree that is not useful or agreeable to man. It was, and still is, the custom in the East to mingle the grains of the Pomegranate with wine; and indeed its own fresh juice has often been compared with wine.

The wine of the Pomegranate, of which Solomon speaks in the Canticles, was, however, we may be assured, real wine, the art of making which from Pomegranates is still practised in Persia; and Chardin says that great quantities of it were made in that

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And in these rocks for us did frame
A temple, where to sound his name.
Oh! let our voice his praise exalt,
Till it arrive at Heaven's vault;
Which thence (perhaps) rebounding may
Echo beyond the Mexique Bay.'

Thus sang they, in the English boat,
A holy and a cheerful note;
And all their way, to guide their chime,
With falling oars they kept the time."

kingdom, both for home consumption and for exportation, in his time.

Several places in Palestine were named after the Pomegranate. Nehemiah and Zechariah* both mention En-Rimmon, or Ayn-Rimmon, the fountain of the Pomegranate.

We find, in the second book of Kings †, that one of the Syrian gods was Rimmon, which is the Hebrew name for Pomegranate: and many of the Greek deities were occasionally represented holding a Pomegranate. Jove, Juno, and Venus were often so distinguished: but it was to Proserpine that this fruit was especially dedicated; and hence Hercules has that fruit in his hand, when figured as returning from Hades.

Among the Ionian Greeks much honour was rendered to the Pomegranate, for their poet-priests feigned that it first sprung from drops of the blood of Bacchus; wherefore it is not unlikely that the name of the Syrian god Rimmon was one of the appellations of Bacchus himself. Plutarch, in describing the feasts of the Jews, imagines that they were celebrated

* Nehemiah, xi. 29. Zechariah, xiv. 10.

† 2 Kings, v. 18.

in honour of Bacchus, and that the palm branches carried in procession to the Temple, at the feast of Tabernacles, were to do him honour; an opinion probably strengthened by the offerings of Pomegranates and other lasting fruits. Tacitus, also, fancied the golden vine found in the Temple proved that the Jews worshipped Bacchus; and this error probably arose from finding Bacchus Rimmon really a Syrian deity.

The remarkable beauty of the Pomegranate very early attracted the attention of sculptors and architects. In the book of Exodus* we find that Bezaleel and Aholiab, the *wise in heart*, as men of genius are called in Scripture, who were employed in framing the ark of the covenant, used the Pomegranate profusely as an ornament; and that it also adorned the vestments of the sons of Aaron. In later and more refined times, Hiram, the Tyrian architect, whose mother, however, was a Jewess, employed the Pomegranate in the rich capitals of the pillars of Solomon's Temple; an example followed by the builders of the second house of God, on the restoration of the Jewish nation from the Babylonian captivity.

* Exod. xxviii. 33.

Poets, ancient and modern, Oriental and classical, have vied with each other in praising the Pomegranate; but none has exceeded Solomon, who compares the graces of Christ's spouse to the opening Pomegranate, and says figuratively to her: "Come, my beloved, let us go forth into the field; let us lodge in the villages. Let us get up early to the vineyards; let us see if the vine flourish; whether the tender Grape appear, and the Pomegranates bud forth."

POPLAR.

Populus alba,— White Poplar.

Linnæan class and order, Diœcia Octandria.
Natural order, Salinaceæ.

POPLAR.

Genesis, xxx. 37. Hosea, iv. 13.

Both the Black and the White Poplar are indigenous in Palestine, but the Hebrew word used in these texts signifies whiteness, and therefore Celsius and his followers have decided that the White Poplar is intended.

The roads and public walks about Damascus are bordered with both kinds of Poplar; and nothing can be more agreeable than their shade, especially where, enclosing gardens and vineyards, they serve as props to the vines, and are hung about with clustering grapes.

Rauwolf speaks of the number of White Poplars that adorn all parts of Syria and Palestine, where the intense heats are mitigated not only by their shade, but by the constant rustling of their delicately hung leaves.

The timber of this beautiful tree makes good flooring; and, being light, tough, and close, serves well for furniture and household utensils. The dry

leaves are used as winter fodder for sheep, but the shade injures the summer grass.

The tender buds, when crushed, are highly aromatic, and are used by the apothecary and surgeon; and the balsam that exudes from the bark mitigates pains in the head.

It is probably on account of the medicinal qualities of the White Poplar, that the ancient poets feign that Hercules received a branch or a young plant of it from Proserpine when he visited Hades. He is often represented with a garland of White Poplar on his head; and the Greeks attribute to him the introduction of this beautiful tree into Greece.* To encourage the planting of the White Poplar, the burning any other wood with sacrifice on the altar of Jupiter in Elis was prohibited; and the wood-carrier of the temple enjoyed a monopoly of the White Poplars in the neighbourhood.

On considering this sacred character of the tree in Greece, it appears remarkable that the prophet Hosea† should name the White Poplar among the trees

* Pausanias, Elliacs, c. xiii. The same writer says that the Black Poplar is sacred to Hermes.

† iv. 13.

under the shadow of which Israel provoked the wrath of the Almighty, by sacrificing to the gods of the heathen.

The first, indeed the only other, mention of the Poplar in Scripture is in the history of Jacob, when he kept his father-in-law Laban's flocks,

> " by spring and vale,
> Edged with Poplar pale ;"

and used the young branches of trees, so as to circumvent the repeated frauds of Laban, ere he withdrew to his own land, with his wives, and his children, and his hard-earned substance, guided and protected by the God of Abraham.

QUINCE.

Malus Cydonia,— Quince.

Linnæan class and order, Icosandria Pentagynia.
Natural order, Rosaceæ.

QUINCE.

Proverbs, xxv. 11. Song of Solomon, ii. 3. 5.; vii. 8.; viii. 5. Joel, i. 12.

THE texts above have been already quoted at the head of the notice on apples: but in these passages, though rendered apple in our version, the Hebrew word is *Tappuach*, Quince. How early it was known and esteemed in Palestine appears from the fact, that, before the Israelites arrived from Egypt under Joshua to take possession of the promised land, three places were named after it: Tappuah, Quince; En-Tappuah, the fountain, or spring head, of the Quince; and Beth-Tappuah, the well of the Quince.*

The Quince of the East is as much superior to the harsh Quince of our orchards, as our cultivated apples are to the hard crude apples of hot climates. Of those known to the ancients, three were particularly esteemed; and the best of all was the Chrysomela, or golden apple, of Judea. When Tavernier travelled,

* Joshua, xv. 34. 53.; xvii. 7.

he found the best Quinces, however, in Vardana, a district of Arabia Felix; and he says they were not rough like ours, but rather to be compared with apples.

The Quince conveyed from the gardens of Europe to Brazil seems to have recovered most of its Oriental delicacy; and the various confections prepared from it are not only valued as dainties, but as medicines of great efficacy in that scourge of warm climates, dysentery.

Several of the antique poets, and Theocritus among the chief, have expatiated on the beauty and flavour of the Quince. But none has surpassed the Canticle of Canticles, which, rightly given, says: "As the Quince among the trees of the wood, so is my beloved among the sons." *

Already, in the book of Proverbs, Solomon had drawn an exquisite simile from this fruit. "A word fitly spoken is like golden Quinces in baskets of silver;" † alluding to the offering of summer fruits in the Temple, which the poor brought in white osier

* Song of Solomon, ii. 3.

† Proverbs, xxv. 11.

baskets, and the rich presented in baskets of silver. And certainly, for elegance and truth, we may seek long and wide ere we find a comparison so complete and beautiful.

REED.

Arundo Donax, — *Reed.*

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINACEÆ.

REED.

1 Kings, xiv. 15.
2 Kings, xviii. 21.
Job, xl. 21.
Psalm xlviii. 31.
Isaiah, xix. 6.; xxxv. 7.; xxxvi. 6.; xlii. 3.
Jeremiah, li. 32.
Ezekiel, xxix. 6.; xl. 3. 8.; xlii. 16, 17, 18, 19.; xlv. 1.
St. Matthew, xi. 7.; xii. 20.; xxvii. 29, 30. 48.
St. Mark, xv. 19. 36.
St. Luke, vii. 24.
3 Epistle of John, v. 13.
Revelation, xi. 1.; xxi. 15, 16.

The Hebrew word *Kaneh*, in our version Reed, comprehends a variety of kinds of Reed and cane, to which we may add one or two of which the name in the original language of Scripture is *Agmon:* Job, xli. 2.; Isaiah, ix. 14.; xix. 5.; lviii. 5. The criticisms on the word *Agmon* alone occupy the whole of a dissertation of twelve pages in the *Hierobotanicon;* and those on *Kaneh*, exclusive of the Kaneh Bosem or sweet calamus, as many more.

Sprengel names the following kinds of Reed and rush as most probably those of Scripture, because they grow naturally either in the Nile or on the shores of the Red Sea, or by the brooks and rivers of Syria and Palestine: — Cyperus Nilotica, or greater

galangale, two species; Arundo Donax, common reed, used for arrows; Saccharum cylindricum, or Egyptian sugar-cane; and Andropogon arundinacea, beard grass: to which we should add the Arundo vulgaris of Bauhin, or Canna palustris, common reed.*

In all likelihood, the sugar-cane was the Reed anciently known, both in Egypt and Judea, as a delicacy; being chewed and held in the mouth, for the sake of its sweet cool juice. The custom of carrying about for sale pieces of sugar-cane, ready peeled, and of convenient size for this purpose, is common to Egypt and India, and has been carried along with the cane to the Western World.

The Arundo Donax, being long, straight, and light,

* Linnæan Classes and Orders.

Cyperus Nilotica, Scirpus articulata and maritima,	*Triandria Monogynia.*
Arundo Donax, Saccharum cylindricum,	*Triandria Digynia.*
Andropogon arundinacea,	*Polygamia Monœcia.*
Arundo vulgaris, or Canna palustris,	*Triandria Digynia.*

Natural Orders.

Cyperaceæ.	*Graminaceæ.*
Cyperus Nilotica.	Arundo Donax.
Scirpus articulata and maritima.	Arundo vulgaris.
	Saccharum cylindricum.
	Andropogon arundinacea.

makes admirable fishing-rods, and most excellent arrows.*

The latter quality was of the greatest importance to the warlike Jews, who, as a nation, appear not to have practised archery with much effect however until the time of David, who caused the people to be taught the use of the bow; and from that time we read often of companies of archers.

We find the word Reed for the first time, in our version of the Bible, in the first book of Kings†, where Israel, chastised by the Almighty, is compared to a Reed shaken in the waters. We next meet with it in the second book of Kings‡: Egypt is called a bruised Reed, and therefore unfit for Israel to depend upon. And the third place where the word Reed occurs is in Job's description of Behemoth: "He lieth under the shady trees, in the covert of the Reeds and fens."§

These three texts have all the word *Kaneh* in the original; but in Job, chap. xli., *Agmon* occurs in the

* Arundo Donax. The heroes of Homer made their arrows of this reed. (*Iliad*, xi.) The tent of Achilles was thatched with the leaves.

† xiv. 15. ‡ xviii. 21.

§ Behemoth, the hippopotamos. xl. 21.

Hebrew twice, and is each time rendered by a word having no reference to Reeds or rushes. Yet critics and commentators, for the most part, agree that we should read, instead of "Canst thou draw out Leviathan with a *hook?*" it should be "with a *rush rope.*" "Canst thou put a *hook* into his nose?" should be "a *rush** into his nose."

Of six passages in Isaiah in which the Reed or some kind of rush is mentioned, one half has in the original *Kaneh*, and the other *Agmon.* "The Lord will cut off from Israel head and tail, *branch* and *rush;*" i. e. things living on land and in water.† "The brooks of defence shall be emptied and dried up, the *Reeds* and *flags* shall wither." Here we have both the Hebrew words diversely translated. Again, in that most beautiful passage which ends with "in the habitation of dragons, where each lay, shall be grass, with Reeds and rushes;" and in the next chapter, the prophet warns Hezekiah not to lean upon that "*broken Reed,*" the King of Egypt, we have *Kaneh;* as also in that tender and touching prophetical description of Christ, "A bruised Reed shall

* Job, xli. 1. 2. The Swedish version reads "ring." Leviathan, crocodile.
† Isaiah, ix. 14. Agmon.

he not break."* But in the bitter denunciation of hypocrisy in the fifty-eighth chapter, when the prophet asks ironically, if the fast chosen by the Lord is for a man to "bow down his head like a *bulrush*," the original is *Agmon*.†

The remainder of the passages in which we have the word Reed are all, in the original, either *Kaneh*, or its Greek synonyme *Calamus*.

Jeremy the prophet, foretelling the fall of Babylon, says: "One post shall run to meet another, and one messenger to meet another, to tell the King of Babylon that his city is taken at one end, and that the passages are stopped, and the *Reeds* they have burned with fire." This last circumstance shows at once the hopeless state of Babylon. Surrounded by low grounds, and defended by canals and ditches cut from the great river, the Reeds of the marshy banks could not have been burnt until an enemy had drained the sluices, and dried up the water passages, and an easy entrance thus secured to one end of the city.‡

Ezekiel, in his grievous prophecies, again upbraids Israel for dependence upon Egypt, who had been no

* xxxv. 7., and xxxvi. 5. † lviii. 5.
‡ Jeremiah, li. 32.

more than a staff of Reed in the hand *: but, in the latter part of the book of the same prophet, the Reed is only mentioned as a measuring-rod.†

The Reed is first spoken of in the New Testament by our Lord himself. Teaching the multitude the true character of John the Baptist as his precursor, he first asks, "What went ye out for to see? A *Reed* shaken by the wind?" and then shows clearly the heavenly mission of John. In the next chapter, the evangelist, summing up the character of the Messiah, repeats the beautiful words of Isaiah, "A bruised Reed shall he not break." But, in the twenty-seventh chapter, the Reed is an implement in the suffering of Christ. It was put by his tormentors into his hand as a mock sceptre, they little thinking that at that moment it became the symbol of an ever-living kingdom. They smote him with it, unknowing that by HIS stripes *we* were healed, and a way for mercy opened even to themselves. They put upon a Reed the last bitter drop Christ was to taste on earth, ignorant that all things were now accomplished, the

* Ezekiel, xxix. 6.

† xl. 3.; xlv. 1. The Italians now measure by the Reed, canna, differing little from our yard.

sacrifice consummated, and Christ prepared to return to the Father in the fulness of glory.

In the fifteenth chapter of St. Mark, the affecting circumstances of the passion are repeated.

Saint Luke omits these particulars; but, in the early part of his gospel, repeats the question concerning John the Baptist.

In the third epistle of John, our version renders Reed by the modern word pen, as it does in the forty-fifth Psalm. The truth is, that the pen made of a quill is never mentioned until the third century; and before that time all writing was done, as it is now by the Orientals, with a reed. These grow every where in Syria and Palestine: but the very best are said to come from Hillah, a small town which has sprung up in one of the deserted nooks of the great Babylon. The writing Reeds of commerce are of two sorts, the largest are white and not very hard, adapted for writing with despatch. The smaller pen Reed is the produce of the same plant. To prepare these, the small and perfect stems are collected and laid for a time to soak; after which they are carefully laid out to dry and regularly turned, during which process they acquire a fine brown colour: the pith is nearly

absorbed, and the outer skin is hardened so as to bear being cut to a very fine point. And it is with such a Reed, or pen, that the most beautiful Eastern manuscripts are executed.

But I am at the last mention of the Reed. After the sea had given up the dead that were in it, and death and hell had given up the dead that were in them, John saw the holy city, the New Jerusalem, coming down from God out of Heaven. And he who talked with him had a golden Reed to measure that city therewith: that city which had no need of the sun, nor of the moon, to shine in it; for the glory of God did lighten it, and the Lamb is the light thereof.

ROSE.

Rosa centifolia rubra, — Damask Rose.

Linnæan class and order, Icosandria Polygynia.
Natural order, Rosaceæ.

Song of Solomon, ii. 1. 2 Esdras, ii. 19.
Isaiah, xxxv. 1. Wisdom, ii. 8.
Ecclus. xxiv. 14.; xxxix. 13.

Hasselquist, during his short time and limited travels in the East, saw the Damask Rose, double White

Rose, Cinnamon Rose, common Red Rose, and says almost all varieties may be had.*

Syria derives its name from the abundance of its native Roses. The rugged sides of Caucasus are clothed with them; they perfume the forests that surround the mountain, and stretch over the lands to Circassia and to Persia, whose poets feign their Gulistan, or Rose garden, to equal the bowers of Paradise. The luxurious inhabitant of Cashmere weaves his delicate web under the shade of clustering Roses; and the palace of the Hindoo rajah and the Mussulman viceroy are refreshed alike by the sprinkled Rose water, and scented with the fragrant attar of the Rose.

All poets, from the days of Anacreon to our own, have celebrated the beauty, grace, and fragrance of the Rose; and it furnishes the moral Sadi with the following beautiful apologue. "One day, as I was going to the bath, my friend put into my hand a piece of scented clay.† The fragrance was so deli-

* That is, every natural variety. The varieties produced by culture, since Hasselquist's time, are scarcely to be numbered.

† The Persians are accustomed to use a kind of unctuous perfumed earth, instead of soap, when in the bath.

cious that I addressed it, saying: 'What art thou, and whence is thy sweetness? Art thou of musk, or is thy substance ambergris?' It answered: 'Alas! of myself I am but a piece of worthless clay; but I was long the companion of the Rose, who hath breathed her sweetness into me.'"

Nor have the inspired writers neglected this fairest type of excellence.

In the Song of Solomon, the mystical church, as foretold in that wonderful pastoral, is called "the Rose of Sharon."

Isaiah prophesies the exulting of the earth at the coming of Christ, saying: "The desert shall rejoice, and blossom as the Rose."

When Esdras, in obedience to the divine command, comforted the chosen people in their affliction, he bade them hope to be "filled with joy by the Roses of the mountain of the Lord."

The son of Sirach makes Wisdom to compare herself with a "Rose plant in Jericho,"* and to call upon

* Some writers have fancied that this expression refers to a little shabby salt plant of the desert, which the monks of Palestine have called the Rose of Jericho, and of which they make a little money. It is the Anastatica Hierochunta, which the poor priests dry, and sell to travellers and pilgrims as possessing I know not what miraculous powers. The truth is,

the children of men to come to her, and to bud forth as a Rose growing by the brook of the field, and to sing a song of praise, and bless the Lord in all his works.

But, beautiful as this last image, the "Rose growing by the brook of the field," may be, how far it is surpassed, not only as a figure, but as suggesting sublime reflections, in the second chapter of the Book of Wisdom! The author introduces the men of the world saying: "Let us fill ourselves with costly wine and ointments, and let no flower of the Spring pass by us. Let us crown ourselves with Rose-buds, before they be withered. . . . . Such things they did imagine, and were deceived, for their own wickedness hath blinded them. As for the mysteries of God, they knew them not, neither hoped they for the wages of righteousness, nor discerned a reward for blameless souls. For God created man to be immortal, and made him to be an image of his own Eternity."

There are few countries in the old world where

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that it is a natural hygrometer, and is damp on the approach of rain, and dry in fair weather, and this unusual property is converted into a marvel. The Anastatica is one of the cruciferous plants; Linnæan class and order, Tetrandria Siliquosa.

some kind of Rose is not found, though America cannot boast of one. Maupertuis gathered Roses of bright red on the banks of the Tenglio, a stream that descends straight from the Lapland hills to the Gulf of Bothnia; and Britain is possessed of a great variety of these charming flowers. We owe the introduction of the double scented flower to Linacre, the founder of the College of Physicians; who brought it and other plants to England, when he returned from his residence in the family of Cosmo de Medici at Florence, and became first the physician to Henry VII., and afterwards tutor to the children of Henry VIII.*

* Linacre was a pupil of Hermolaus Barbarus, who was among the first to restore something like a science of botany from the ancients. In Queen Elizabeth's directions to the first merchants of the Turkey company, in which she desires them to bring to England whatever can grow and profit here, urging them by the example of Linacre, who brought the Damask Rose and other precious plants to England.

RUE.

Ruta graveolens,— Common Rue.

Linnæan class and order, DECANDRIA MONOGYNIA.
Natural order, RUTÆ.

St. Luke, xi. 42.

THE only time Rue is mentioned in Scripture is in the above text: "Woe unto you, Pharisees! for ye

tithe mint and Rue, and all manner of herbs, and pass over judgement and the love of God."

Strong and coarse as are the smell and taste of Rue, many of the ancients used it as a potherb, and it was generally valued for its medicinal properties. Among other merits, it is believed to possess that of dispelling infection; hence it is strewed plentifully about the dock, where criminals are placed during trial in our halls of justice, lest the prisoners should bring contagion from their cells, and spread it among the members and officers of the courts.

The only place where Hasselquist notices having seen Rue in Palestine is Mount Tabor, which he characterises as beautiful and fertile. He says that in his days there was a fair held for sheep and cattle of all kinds, in the little plain immediately beneath; but that the great plain of Esdraelon, beyond it, was kept uncultivated, by the continual battles fought upon it by the different Arab tribes, for now

> "How sad the scenes Judæa's plains disclose,
> A dreary waste of undistinguish'd woes!"*

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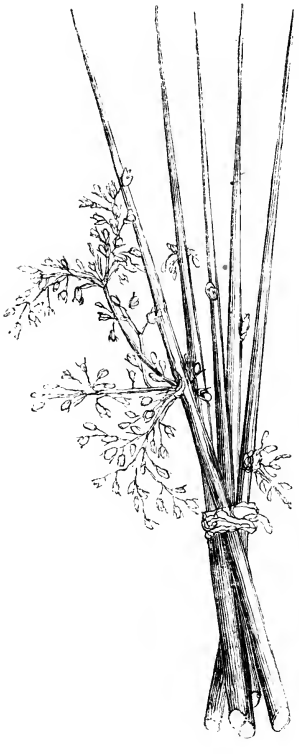
* Heber's Palestine.



RUSH.

Juncus effusus,— Common Rush.

Linnæan class and order, HEXANDRIA MONOGYNIA.
Natural order, JUNCEÆ.

RUSH.

Job, viii. 11. Isaiah, ix. 14.; xix. 15.; xxxv. 7.

THERE is some doubt about the literal translation of the foregoing texts: but the Rush has been seen, by modern travellers, in the deserts near the borders of the Dead Sea, and in other parts of Palestine. It is chiefly a native of very cold climates, but a few species have been found even between the tropics.

The Rush was known to, and used by, the ancients, for the same purposes as those to which it is applied now-a-days. It was esteemed for soft mats by the Romans; and, at this time, the Juncus effusus is cultivated in Japan by mat-makers. Rushes were, in Pliny's time, used for making fishermen's floats, such as may still be seen in the Mediterranean. Among the Romans, the pith of Rushes served for candle wicks; and these rush-lights were especially placed in the chamber where a dead body lay. With us, the rush-light spreads its dim rays in the cabins of the poor, and it is the constant watcher in the chamber of the sick, and by the cradle of the infant.

The soft elastic nature of the Rush renders it, where it can be procured, preferable to straw, for the coarse bedding of the poor; and, but two centuries ago, the floors of all apartments, even those of kings and queens, were strewed with Rushes in England, carpets not being thought of. There is, even at this day, more than one manor in England held of the crown on condition of the owner finding Rushes to strew the sovereign's bed-chamber, when he shall visit the neighbouring castles or hunting-seats.*

* See p. 414. for Rush, where our version gives different words.

RYE.

Secale cereale, — *Common Rye.*

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINACEÆ.

RYE.

Exodus, ix. 32. Isaiah, xxviii. 25.

The commentators are by no means agreed whether this grain or the Triticum Spelta is the Rye of Scripture.

The Rye of Isaiah is probably the grain we know under that name, as it is found wild at the foot of Mount Caucasus and in Syria; for it is remarkable that most of the trees and plants mentioned by that great prophet belong to the northern parts of Palestine.

The Rye of Exodus, on the contrary, is the Rye of Egypt, where it is and was scarce. But spelt, a kind of bearded wheat, was much cultivated there in the most ancient times. Herodotus says that the Egyptians despised wheat and barley, and made a kind of bread, which they called Cyllestis, of spelt, which some call zea or farr.

The Rye, or spelt, of Egypt ripened at the same time with wheat; for, in the plague of hailstones, though the barley and the flax were smitten, the wheat and the Rye were not smitten.

SAFFRON.

Crocus sativus,— Common Crocus.

Linnæan class and order, Triandria Monogynia.
Natural order, Liliaceæ.

Song of Solomon, iv. 14.

The ancients looked upon Saffron as a powerful medicine, and were fond of its perfume: but stronger drugs have almost driven it from the Materia Medica;

and the smell, however agreeable, is too faint for modern taste.

Great quantities of Saffron are imported into England from the Levant, for the dyer's use; and a good deal is grown in Suffolk, for the same purpose.

Those who use Saffron as a medicine consider the Oriental kind as the most powerful; it is prepared from crocuses of various colours, but the English Saffron is obtained only from a native purple kind.

Hasselquist, who seems to have paid great attention to this subject, found the ground between Smyrna and Magnesia in some places covered with Saffron, and praises the beauty of the woods and valleys and shady places, where he found deep yellow and lighter crocuses in full blossom in the early spring.

Russel mentions gardens and fields of crocuses in the neighbourhood of Aleppo, and particularises a very fragrant kind common in Syria. Possibly a mixture of the filaments of this with the ordinary drug may have imparted the perfume which induced the ancients to strew the benches of the public theatres with it, as Pliny tells us they did, for the sake of its fragrance.

This sweet-scented Syrian saffron must also surely

have been that which Solomon places in his garden of sweets, thus: "With spikenard and Saffron; calamus and cinnamon, with all trees of frankincense. . . . . Awake, oh north wind; and come thou, south; blow upon my garden, that the spices thereof may flow out. Let my beloved come into his garden."

SCARLET.

Quercus coccifera,— Scarlet-bearing Oak.

Linnæan class and order, Monœcia Polyandria.
Natural order, Cupuliferæ.

Exodus, xxvi. 1.; xxvii. 16.; xxviii. 5, 6. 8. 15. 33.; xxxv. 6. 23. 25. 35.; xxxvi. 8. 35.; xxxviii. 18.; xxxix. 1, 2, 3. 5. 8. 24. 29.
Leviticus, xiv. 4. 6. 49. 57.
Numbers, iv. 8.; xix. 6.
Joshua, ii. 18. 21.
Revelation, xvii. 34.

Before the discovery of America, the Scarlet of the oak was the most brilliant red dye known, and almost

vied in esteem with the Tyrian purple; and now, though the cochineal has superseded it in a great degree, the Scarlet of Asia Minor, Syria, and Palestine is still among the most beautiful and durable of dye-stuffs.

Pliny speaks of it as a "verie excrement or superfluity arising about the stem of the small shrub Ilex Aquifolia,"* and mentions it as abundant in Spain, various parts of Asia Minor, and Africa. The finest Tyrian purple cloths were, it appears by the statement of the old Roman naturalist, first dyed with the Scarlet grain, and then with the juice of the purple shell; and thus had the name of *dibapha*, or twice dyed.

In most of the texts of Scripture in which the word Scarlet occurs, the colour alone is intended; but, as a colour, it is equally precious with the fine Egyptian blue, the Tyrian purple, and the pure white twined linen of the priests' garments. It is particularly distinguished from the red (a dye from ochre) of the skins that covered the tabernacle; for it was only used in the curtains of the inner tabernacle, the

* Holland's translation, b. xvi. c. 8.

most holy court, and in covering the vessels of sacrifice when the nation journeyed.*

The Scarlet was so unusual, so distinguished, that a band or list of it was given by the spies of the Hebrew people, as a token, to Rahab of Jericho, by whose ministry they had achieved their difficult mission, to bind in her window, that she and her house might be saved when Joshua should take the city.

The 6th verse of the nineteenth chapter of Numbers is the ground on which I have placed the Scarlet among the plants of the *Scripture Herbal.* "And the priest shall take cedar wood, and hyssop, and Scarlet, and cast it into the midst of the burning." This burning was that of the heifer, whose ashes, along with those of the cedar, hyssop, and Scarlet, were to be the cleansing part of the water of separation, which, on all occasions, was to be used as a purification by the congregation of Israel. Now the Scarlet here is certainly some tangible substance, and not merely the name of a colour; and it seems more probable that portions of the tree or shrub

* Numbers, iv. 8.

on whose leaves and branches the Scarlet grains were found should be used in the burning, than even the Scarlet grains themselves. *

The climate of the countries bordering on the Levant seems to be favourable to the insects which infest different kinds of oak. Travellers have found districts in which honey dew is so frequent on a peculiar kind of oak, that they have fancied that the honey with which Jonathan refreshed himself after a hard-fought battle † was the honey dew of the oak wood through which he passed; and it is notorious that the greater part of the oak galls used in dyeing cloths black is imported from the ports of Syria and Palestine.

These galls, however, are produced in the northern parts of the Holy Land, whereas the Scarlet-bearing Oak spreads itself far to the south, and grows even in Africa; so that its wood might without difficulty have been procured to burn on occasions of solemn sacrifice,

* "Scarlet grains," "substances dyed red in grain," are expressions taken from the opinion of most of the ancients, that the Scarlet was a vegetable grain formed on the shrub. The old Arab name Kermes or Alkermes, which means a worm, shows that in Arabia the real nature of the Scarlet was understood.

† 1 Samuel, xiv. 27.

and such in every sense was the burning of the red heifer with the adjuncts, whose ashes were to serve for the purification of the people of the Lord, even while journeying in the wilderness.

SHITTIM WOOD.

Acacia vera, or Acacia Arabica, or Mimosa Nilotica,—
Shittim, or Gum-Arabic Tree.

Linnæan class and order, Polygamia Monœcia.
Natural order, Leguminosæ.

SHITTIM WOOD.

Exodus, xxv. 10. 23.; xxvi. 26. 32. 37.; xxvii. 1.; xxviii. 1.; xxx. 1. 5.; xxxv. 24.; xxxvi. 20. 31. 36.; xxxvii. 1. 4. 10. 15. 25. 28.; xxxviii. 1. 6.

Numbers, xxxiii. 49.
Deuteronomy, x. 3.
Isaiah, xli. 19.
Micah, vi. 5.

This tree is of the middle size; the young branches are armed with twin thorns, and the leaves are doubly pinnate. The elegant flowers hang among the leaves like minute golden balls, spreading around a delicious odour.

From the bark exudes the Gum-Arabic, so important in medicine, to the arts, and to our manufactures.*

This tree, with very trifling variety, is found from Upper Egypt, where Bruce saw it and calls it Acacia Lobbek, to India. Hasselquist says the Arabs call the Lobbek Shittah. Shaw met with it in the district of Mount Sinai under the same name; and says that, both there and in the neighbourhood of the Red Sea, the traveller finds little provender for his camels besides the leaves of the Acacia vera.

* The quantity of Gum-Arabic imported in 1841 yielded a net produce to the revenue of 5,454*l.*

From the time of Theophrastus to our latest botanists the wood of the Acacia vera has been considered as uncorruptible. Hence it was a peculiarly fit material for the construction of the ark of the covenant; having, besides, the recommendations of being hard and close-grained, so as to take an excellent polish, and that it was to be found on the very spot where the Israelites encamped while the workmen and workwomen were employed under Moses in framing it.

The passages in the book of Exodus where it is mentioned refer solely to its use as the material for the ark of the covenant. In Numbers we find it forms the distinguishing part of the name of a place in the plains of Moab, the inhabitants of which appear from the context to have been highly civilised *; and the prophet Micah writes of the same place. †

But Isaiah, in his prophesying of the glorious changes that should take place when God should restore Israel, says: "I will plant the cedar and the Shittah tree and the myrtle;" thus reckoning it among the choicest trees, for beauty, strength, and fragrance.

* Numbers, xxxiii. 49. 52. † Micah, vi. 5.

SOAP.

Salsola Kali,—called Borith, or Herb of the Washers.

Linnæan class and order, PENTANDRIA DIGYNIA.
Natural order, CHENOPODEÆ.

Jeremiah, ii. 22. Malachi, iii. 2.

OUR version gives the word Soap for *Borith*, Prosper Alpinus translates it kali, and most of the early writers call it the fuller's herb or the washer's herb.

One unnamed friend of Celsius suggests the teasel, because it is used by the fullers in raising the nap of woollen cloths after cleansing; but this, from the sense of the texts, is inadmissible.

Rauwolf, in his travels, met with two plants which the natives of the country called kali, and gives descriptions and wood-cuts, which last, though rude and coarse, show clearly that his first kali is the Salsola Kali, and, as far as his print goes, the other is probably a Salicornia. He says that both these plants abound in Arabia; where the various tribes gather and burn them for the sake of the ashes, which they sell in the cities of Syria for the purpose of making soap and glass.

Like many others of the most useful articles of domestic consumption, bread for instance, the origin of the manufacture of soap is unknown. From time immemorial it has been made in Syria and Palestine in large quantities, and forms a main article of their trading exports. Russel and others mention the profusion of kali, or ashes, brought in to the cities by the Arabs of the Desert; and the moors about Joppa furnish a quantity of an inferior kind, from the burning of the heath which covers them. The large measure of

vegetable oils furnished by the olives, nuts, and seeds, especially those of the sesamum, which abound in Syria, facilitate the soap manufacture, which to this day is so profitable in the Levant; most of that used in Greece and Egypt, and some of the Greek islands, being the produce of Palestine.

Now, though this is not a positive proof that Soap, as we understand it, was intended by the prophets, yet it bears so close upon the matter, especially if we take into consideration the uninterrupted custom of soap-making, for as many centuries as we can go back, in the East, I think we may conclude fairly that the materials for soap, the Salsola of the Arab sands, and perhaps also the Salicornia, must be the *Borith* of the Hebrew prophets.

Jeremiah says: "Though thou wash thee with nitre, and take thee much Soap, yet thine iniquity is marked before me, saith the Lord."

Malachi, alluding to the searching mission of St. John the Baptist, says: "Who shall stand when he appeareth? for he is like a refiner's fire and like fuller's Soap." Both of which texts evidently mean some cleansing substance, powerful to remove stains and blemishes, and to restore beauty and purity to the

garment submitted to it; objects which would be best, if not solely, obtained by the use of Soap compounded of some kind of ashes with oil or fat, though the use of ashes alone, for woollen cloths, probably prevailed in the most ancient times.

SPIKENARD.

Nardostachys Jatamansi, or Valeriana Jatamansi.

Linnæan class and order, TRIANDRIA MONOGYNIA.
Natural order, VALERIANEÆ.

SPIKENARD.

Song of Solomon, i. 12.; iv. 13. 14. St. Mark, xiv. 3. St. John, xii. 3.

The Spikenard of the Scriptures, and of the Greek and Roman writers, had long been forgotten as a living plant, if indeed it was ever known excepting as an Indian drug until our own days.

Clusius first figured the dried Spikenard of the shops, and the figure was copied by Gerard in his *Herbal.** This cut so exactly corresponds with the description given of the Spikenard by the Arabian and Indian writers on medicine, as to afford a strong presumption that the drug described, and the figure given, belong to one and the same plant. The appearance of the drug is compared to a bundle of the tails of ermines, but not so dark in colour; and such, it appears, is the figure.

* It was not uncommon for the printers of one country to lend their wood-blocks to those of another, and it is therefore likely that the figures of Clusius and of Gerard are identical. A similar cut, though evidently taken from a different specimen, is in Camerarius's edition of Mathiolus's *Epitome*.

DRUG SPIKENARD.

When Sir William Jones went to India, he was naturally anxious to promote whatever science and whatever learning could throw light on that interesting, and then comparatively unknown, country. The books of the ancient classical writers were full of references to Indian odours, and spices, and drugs: but what trees produced them, what plants or roots might contribute to their number or efficacy, were

questions to which few plausible, and fewer true, answers could be returned.

One of the first botanical enquiries of Sir William was concerning the Spikenard of the ancients. From both Hindoo and Mussulman physicians, he received descriptions agreeing remarkably with the figure of Clusius; and was told that in the Indian bazaars it was commonly sold by the name of Jatamansi, which means a lock of hair, to which the dried Spikenard has a stronger resemblance than even to a bundle of ermines' tails. Sir William applied his philological skill in tracing the various names of Spikenard through the Greek, Arabian, Persian, Sanscrit, and several vernacular dialects, so as to satisfy himself and others that Spikenard and Jatamansi were one. In consequence of his conviction, he published the following opinion in the *Asiatic Researches*, vol. iv. p. 117.

"I am persuaded that the true Nard is a species of valerian produced in the most remote and hilly parts of India, such as Nepal, Morang, and Butan, near which Ptolemy fixes its native soil. The commercial agents of the Deva Rajah call it also Pampi; and by their account the dried specimens, which look like the

tails of ermines, *rise from the ground resembling ears of green wheat, both in form and colour;* a fact which perfectly accounts for the names, *Stachys*, *Spica*, *Sumbul*, and *Khushah*, which the Greeks, Romans, Arabs, and Persians have given to the drug, though it is not properly a *spike*, and not merely a *root*, but the *whole plant*, which the natives gather for sale, before the radical leaves, of which the fibres only remain after a few months, have unfolded themselves from the base of the stem."

The question now arose as to what the Jatamansi could be, and what part of India produced it, as it certainly was not brought to the market from any part of the country at that time under the dominion of the British.

Taking Dioscorides for his guide, Sir William caused enquiries to be made in the neighbourhood of Butan, and accordingly found that great quantities of the Jatamansi were imported from that country, that the native government was so sensible of its importance that it did not allow any plant of it to be carried out of its boundaries without especial permission from the Maharaja, and that it grew in a mountainous district. After some delay, and

incurring considerable expense, the chief of Butan permitted several baskets of roots to be sent to Calcutta; but they died by the way, nothing remaining but the little spikes like ermines' tails, which resembled the drugs of the shops. Some plants, however, believed to be the same, had been procured and saved by Mr. Burt, English resident at Gayà; and he made a drawing, and sent it with a description to Sir William which showed that it was a valerian, not the same with the valerian known in Europe as Nardus Celtica, but of the same family.

The drawing was engraved to accompany Sir W. Jones's dissertation on the Spikenard of the ancients, in the second volume of the *Asiatic Researches;* and copied and embellished from a description by Haynes in his *Arzney Gewächse.**

It might have been objected that the scent of the valerians is in general not very agreeable, and therefore the rich perfume whose fragrance filled the whole house could not proceed from one of these: but, in the first place, we cannot judge of what perfumes were most agreeable to the ancients; and, in the

* Vol. ix. tab. 27. Berlin, 1805. Geiger has also adopted this figure.

second place, the odour of the Spikenard is no where said to have been used alone. It was certainly, among the ancients, used as the modern Hindoos use it, mingled with fragrant oils and spices, "according to the art of the apothecary;" and those of Laodicea and of Tarsus had the reputation of making the best. All the spices of the Eastern isles, the oils of reeds and grass, those of santal and of lign aloes, made part of the precious compound which was sold in boxes of onyx and of alabaster.

When Horace invites Virgil to a feast, he tells him his share of the contribution is to be the perfume, while he gives the wine:

> "Thy little box of Spikenard shall produce
> A mighty cask that in the cellar lies."*

And such, as I shall by and by show, had been the use of Spikenard in Judea from remote antiquity.

It is curious that an ointment into which Spikenard enters, should be still used in Upper Egypt and Abyssinia to anoint the face and preserve the skin from the effects of the burning sun; and it is still more curious, that, when Hasselquist travelled in

* Francis's Horace, b. iv. ode 12.

Egypt, he found that the Venetian merchants annually brought sixty tons of Celtic Spikenard, which is certainly a valerian, to Cairo, where the Nubians and Abyssinians bought it at the great price of one hundred rix-dollars a ton, because the Indian Spikenard was so scarce as to be hardly procurable.

It happened, by a curious coincidence, that just at the time when Sir William Jones had thus supposed he had traced the true Spikenard to its native country, and published his account of the Valerian Jatamansi, that the late Sir Gilbert Blane imagined he had found it in a very different plant, which had been sent him by his brother from Lucknow, and of which he gave specimens to Sir Joseph Banks. On examination, it proved to be a grass of the genus Andropogon, differing, however, from any before described. Thus Linnæus's conjecture, that the Spikenard is a grass, appeared to be confirmed.

The manner in which Mr. Blane discovered this grass is worthy of notice. In 1786 he was out on a hunting expedition with the Nabob Vizier of Lucknow, when one day the air became suddenly perfumed with a most agreeable odour. On enquiry, he found that it proceeded from the grass which the

elephants were bruising under foot; upon which he immediately collected some of the plants, and set part in his garden at Lucknow, and part he sent to his brother in England. This adventure of Mr. Blane's resembled closely a story related by Arrian, in his account of the march of Alexander to India. He says that, when the Macedonian army was passing through Gedrosia near the Indus, the air was perfumed by the Spikenard trodden under foot by the soldiers, and that the Phœnicians who accompanied the expedition collected large quantities of it to carry to their own country as merchandise. The fact of Mr. Blane's discovery of the scented andropogon, and the story from Arrian, formed the subject of a paper read before the Royal Society; and, by most persons, the Andropogon Nardus Indica was at the time received as the Spikenard of the ancients.

The paper was sent by Blane to Sir W. Jones, who read it, as he says, with great pleasure, but without conviction; and he easily overturned whatever evidence might be supposed to be afforded by Arrian, showing that that author was little trustworthy, especially in matters concerning natural history, as he asserted that cinnamon, myrrh, and other spices

and gums, all grew abundantly in Arabia, where it is certain they never could have been found. Sir William's essay, in the fourth volume of the *Asiatic Researches*, also shows that the geography of Arrian will not tally with Mr. Blane's discovery; and proves pretty clearly that the andropogon in question cannot be the true Spikenard.

He goes on then, with as much good sense as learning, to show that the Valeriana Jatamansi of Butan had the best claim to the venerable name of Spikenard. And this was one of the last botanical essays that accomplished gentleman and Christian scholar lived to write.

Dr. Roxburgh, in the same volume of the *Researches*, makes some valuable remarks, and gives a scientific description of the plant. Time, however, and the advance made by the English in the North of India, showed that, either by accident or design, proceeding from the commercial jealousy of the government of Butan, a wrong species of the plant had been received by Mr. Burn at Gayà: but Dr. Wallich was fortunate enough to find the true Jatamansi growing in the mountains of the northern provinces; and his and Dr. Roxburgh's descriptions were received in

Europe as belonging to the true Spikenard of the ancients, and De Candolle named it Nardostachys Jatamansi.

But in the year 1830 the claims of the andropogon of Blane were revived; and an elegant paper drawn up by Charles Hatchett, Esq., and read before the Royal Society, after recapitulating Mr. Blane's discovery of the plant, and the historical proofs from Arrian, gives the following account of what he believes to be an unanswerable confirmation of the opinion originally entertained by Sir Gilbert Blane, that his brother had really discovered the ancient Spikenard.

Mr. Swinton of Swinton, who had been thirty years resident in India, had passed some of that time in Malwah, where, being attacked by acute rheumatism, after suffering a great deal, he was persuaded by some of the native chiefs to try as a remedy the *rhoonsee ka tiel*, or oil of grass. Having experienced great benefit from it applied as an embrocation, he sent some to Dr. (afterwards Sir William) Russell at Calcutta, who recommended it with good success to several patients.

Mr. Swinton learned that the oil had been prepared

time immemorial in and around Malwa, the method being kept profoundly secret, though it is certain that it is obtained from the spike of the grass.

The Parsees appear at one time to have enjoyed a monopoly of this oil; but it is now in the hands of the Mahommedan Borahs, who sell a small quantity at a very high price to the chiefs, and the rest to the Arab merchants, who carry it westward, where the greater part finds its way to the Turks and Egyptians and a small portion to the Arabs of the Desert, who have a high opinion of its virtues.

But, though this account of the *rhoonsee ka tiel*, when added to Sir Gilbert Blane's former statement, might form a strong presumption of the probability that the andropogon was the Spikenard, there was no proof of its being so; and, moreover, there was much that told against it, although Linnæus, gathering the fragments of ancient description, had expressed his belief that the Spikenard was a grass. In the first place, the description of the drug Spikenard, like a bundle of ermines' tails, was inapplicable. Then the constant assertion that Spikenard came from the far East, the custom of the Nubians and Abyssinians, kept up without interruption, of compounding their

ointment of Spikenard with a valerian of inferior quality as the best substitute for the true Spikenard, are almost proofs that a grass growing to the west of India, and the like of which is to be found in Arabia and in many parts of Syria, instead of being brought from the Gangetic provinces, is not the ancient Spikenard.

The number and variety of the grasses yielding fragrant oil, precious medicine, and admirable as perfumes, in both the continent and islands of India, is very great; and they are probably not all perfectly known yet, notwithstanding the zealous search of modern botanists. One, at least, of these oils is called Nardin; and it appears that the word or rather syllable, *nard*, in the name of a plant, implies sweet-scented, in some of the old southern dialects of India, and also in Persian.

Among these I have already mentioned that Dr. Royle believes he has found the Calamus aromaticus of the ancients, the *Kaneh bosem* or sweet cane of Scripture, which Clusius sought for so diligently, but in vain.

But it is time to return to the Jatamansi, which certainly is the drug sold for the Spikenard, and

described by the Greek, Arabian, and Hindoo physicians.

Dr. Royle, finding that a quantity of the root was brought down from the mountains, year by year, procured several pounds of it newly dug, at the end of the rainy season, at Nagul, a village five miles from Deyra, and one of the commercial store places at the foot of the mountains. These he planted in two different botanic gardens belonging to government, where they germinated; and he has figured them in his elegant work on the natural history, particularly the botany, of the Himalaya Mountains. This shows that the plant is identical with that of which a drawing was sent home by Dr. Wallich, and which was published by Lambert, and described in the *Flora of Nepal* by Don.*

Having, as I trust, given a faithful account of what is now known of the Spikenard, I must consider it as belonging to my *Scripture Herbal.* But, first, I may mention that our old English herbalists had, in

* My wood-cut is from a part of Dr. Royle's figure, the whole being too large to reduce to any intelligible scale. I have also given a cut, copied from Gerard, of the drug Spikenard, as known to the apothecaries of his time.

different parts of the kingdom, given the name of Ploughman's Spikenard to a Baccharis and to a Conyza. The latter, indeed, still retains the name. It is remarkable for the agreeable perfume, resembling cinnamon, given out by its root in burning; and is, no doubt, the Nard that Ben Jonson alludes to in his beautiful song:

> "Have you smelt of the bud of the briar,
> Or the Nard in the fire?"

The use of perfumes at the feasts of the ancients was by no means confined to what we look upon as the classical ancients, who, in all probability, borrowed it from their Eastern neighbours, whose descendants continue the practice; and with them, in Nubia, Ethiopia, and Arabia, the real Spikenard is used as a perfume, and in various medicinal unguents; but always with other fragrant substances, the scent and power of which it is thought to increase, and, as a valerian, to have a salutary effect on the nerves. I have already noticed that these precious medicinal unguents were kept in boxes of alabaster or onyx by the ancients; and one of these it was that the pious woman in the gospel brought to Jesus's feet.

How precious this ointment of Spikenard was in Jewry, and on what occasions it was used in most ancient days, we are taught by Solomon, who says: "While the King sitteth at his table, my Spikenard sendeth forth the smell thereof." *

Mary, therefore, as at a royal feast, took the alabaster box of Spikenard, very precious, and brake it, and poured it upon Jesus's feet.† "She anointed his feet, and wiped them with her hair, and the house was filled with the odour of the ointment."

One hypocrite was present, the betrayer of the innocent person. He exclaimed against the waste of the precious ointment, saying the price might have been given to the poor. But Jesus defended the pious act; and promised that, "wheresoever this gospel shall be preached throughout the whole world, this also that she hath done shall be spoken of for a memorial of her."‡

* Song of Solomon, i. 12.
† St. Mark, xiv. 3. St. John, xii. 13. ‡ St. Mark, xiv. 9.

STACTE.

Balsamodendron Kataf, or Amyris Kataf,— Stacte, or Myrrh Tree.

Linnæan class and order, Octandria Monogynia.
Natural order, Terebintaceæ.

STACTE.

Exodus, xxx. 24.

We learn from Pliny that this gum was very precious; it was the spontaneous exudation from the tree producing myrrh, whereas that drug was procured by making incisions in the bark.

It was used, even in preference to frankincense, on the altars of the higher Pagan gods.*

Dioscorides and other ancient writers praise the excellent sweet perfume of the Stacte. This agrees with the verse in Exodus: "Take unto thee sweet spices; Stacte, and onycha, and galbanum, these sweet spices with pure frankincense." Dr. Ehrenberg found two species of Amyris growing on the confines of Arabia Felix, among acacias, moringas, and euphorbias; one he called Balsamodendron Myrrha, and the other Balsamodendron Kataf. They both produce myrrh. The bark of both is ashen grey and smooth; the wood a yellow white, leaves ternate,

* Dr. Harris mentions Euripides as the authority for this, but does not quote the passage.

the flowers insignificant. The gum is usually in a very dirty state, being mixed with others less precious from other trees. Dr. Eberhart gave the specimens to Nees v. Esenbeck, from whom I copy the figure of the Balsamodendron Kataf here, having given the Balsamodendron Myrrha already.

STORAX.

Styrax officinalis,— Common Storax.

Linnæan class and order, DECANDRIA MONOGYNIA.
Natural order, STYRACEÆ.

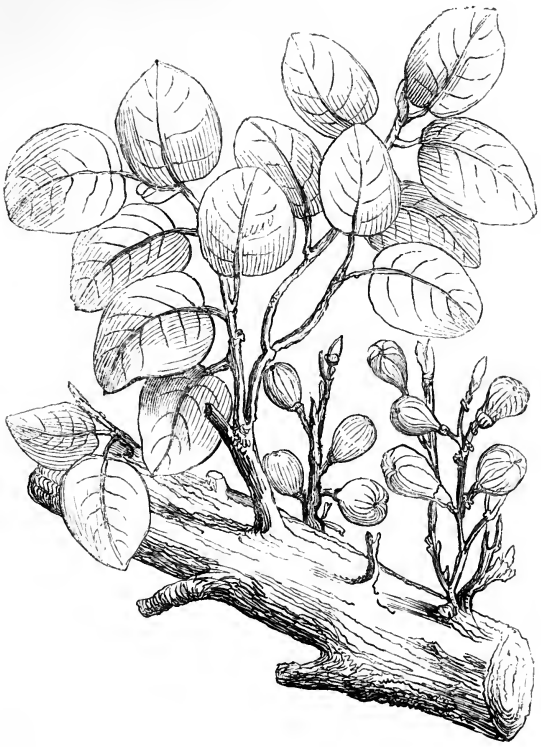
STORAX.

Ecclus. xxiv. 15.

This is a small tree with a smooth bark. The shoots are downy, and the deep green leaves are lined with white down. It bears a white flower, and is altogether pleasing to the eye. It is very common in Syria and Palestine, and grows all over the Levant, and in Greece and the Peloponnesus.

The fragrant resinous balsamic substance called Storax is obtained from the branches of the Styrax by incision. It is of a brownish red colour, and crumbles like half-dry clay between the fingers, leaving an unctuous feeling behind. The Styrax will grow in England, but does not produce the drug.

The medicinal preparations of Storax are various; but it is chiefly used for asthma, cough, and other similar disorders. Some have supposed that the first distillation of the Styrax, not the myrrh, is the true stacte.



SYCAMORE.

Ficus Sycomorus,—Pharaoh's Fig, Sycamore Fig.

Linnæan class and order, Polygynia Diœcia.
Natural order, Urticeæ.

SYCAMORE.

1 Kings, x. 27.
1 Chron. xxvii. 28.
2 Chron. i. 15.; ix. 27.
Psalm lxxviii. 47.
Isaiah, ix. 10.
Amos, vii. 14.
St. Luke, xix. 4.

It is a pity that a misapplication of the name of Sycamore to the greater maple or Acer Pseudo-Platanus, instead of the wild fig, should have given a notion to all English Bible readers so opposite to the truth, as that our northern tree stood the heats of an Egyptian, or even of a Syrian, summer.

It is believed by some naturalists, that the Ficus Sycomorus, or Pharaoh's fig, is the only tree really indigenous in Lower Egypt. It abounded in that country, in Syria, and the larger islands of the Levant, in ancient times; but, Pliny says, was too delicate to bear the winters of Greece or Italy. It is still cultivated in the neighbourhood of Cairo, on account of the delicious shade it affords, rather than for the fruit, although that is of considerable value and importance in the country.

The Ficus Sycomorus is an enormous tree, often

measuring fifty feet in girth. The leaves have the glossy green of those of the pear tree, and are something larger. The fruit grows upon the main branches of the tree, and on the trunk itself, in clusters. It is very abundant, and yields its harvest several times in the year. The fresh fruit is rather insipid; it is soft, watery, and sweetish, with a slightly aromatic taste. When dry, it is greatly inferior in flavour to the garden fig; nevertheless it is highly prized in the Levant, and furnishes an agreeable and very considerable portion of the food of the field labourers in Rhodes, Cyprus, and Egypt. The ancient Egyptians and Cretans used a sort of iron rake, wherewith they scratched the young fruit, in order to wound the skin sufficiently to permit the entrance of a small black fly into the figs, which, it appears, secured and hastened their ripening; and something of the same kind, as we learn from Tournefort, is practised by the moderns.

The wood of the Sycamore fig, or, as it is often called, Pharaoh's fig, is light, tough, and durable; fit for furniture and agricultural tools, and therefore invaluable in Egypt, where timber trees are almost unknown.

Josephus tells us that the greater number of coffins and mummy cases were made of Sycamore, because it resisted the damp; but more probably because it was almost the only material to be had in sufficient quantity.*

The fig most resembling Pharaoh's fig in external appearance is perhaps the pippala of India, of the leaves of which a curious use is sometimes made by the Chinese. They strip off the fleshy sheathing of the leaf, leaving the vessels, which are tough and form a very close white network, entire. Upon these they stamp the figures of the Indian gods, and colour them for sale. Dr. Roxburgh has described at

* Norden's description of the Sycamore fig. "This Sycamore is of the height of a beech, and bears its fruit in a manner quite different from other trees. It has them on the trunk itself, which shoots out little twigs, in the manner of grape-stalks, at the end of which grow the fruits, close to one another, almost like bunches of grapes. The tree is always green, and bears fruit several times in the year, without observing any certain seasons, for I have seen some Sycamores that have given fruit two months after others. The fruit has the figure and smell of real figs, but is inferior to them in taste, having a disgustful sweetness. Its colour is yellow inclining to an ochre, and shadowed by a flesh colour. In the inside it resembles common figs, except that it has a blackish colouring, with yellow spots. This sort of tree is very common in Egypt. The people, for the greater part, live upon its fruit; and think themselves well regaled, when they have a piece of bread, a couple of Sycamore figs, and a pitcher filled with water from the Nile."

least a hundred kinds of fig, including the banyan, or Ficus religiosa, as natives of India, and Dr. Wallich as many more. Among them are many considered by the native physicians as highly medicinal.

I do not know a more venerable object than an ancient banyan tree, surrounded and supported by its numerous young stems; while pendent roots from every heavy branch promise new props to the parent trunk. Under its numerous bowers, not only the cattle of the plain take shelter from the noon-tide heat, but the palm-wove dwelling of the Brahmin, and the huts of the Soodras, there find protection; the temple and the tank being never far distant: and, when I visited India, the rude tablets carved with the figures of Hoomayun and Ganesa were suffered to lean against some of the many trunks, that the very Pariah might not feel himself without a God.

In the new world, the fig trees are among the largest of the forest; and I have often admired the huge buttresses which some that I have seen near Bahia push out, shaped like those of some ancient cathedral, to support their enormous height. The fig trees of Brazil appeared to me to be the choice habi-

tation of the numerous and beautiful parasite tribes that seem to form an airy garden over the travellers' heads.

But to return to the Sycamore fig. That it grew abundantly in ancient Judea, we know from the repeated expression used to designate great prosperity, "that the cedar trees should be as plenty as Sycamores."

That the Sycamore was of importance, as well as abundant, in Jewry, appears from the fact, that, when on David's resignation of the kingdom to Solomon the various officers of the state and the royal house were appointed, one was especially set over the "Sycamore trees that were in the low plains." And in the forty-seventh psalm, where David describes the evils brought upon a rebellious people, he says that the Lord "destroyed their Sycamore trees with frost."

The prophet Amos says of himself, that he was by trade a gatherer of Sycamore fruit, and a herdsman of Tekoa. Therefore we know that the tree continued to be cultivated in the plains, and its fruit preserved, to late times in the kingdom of Judah.

The last time the Sycamore is mentioned in Scripture is in St. Luke's account of Christ's going to

Jerusalem riding on an ass, the people meeting him and shouting Hosannah; when Zaccheus, being short of stature, climbed into a Sycamore to see the Lord go by.

That favoured Sycamore has long been dead, but the poor Christians of Palestine, who are fain to turn every thing to account, have pitched upon a flourishing wild olive, or elæagnus, growing somewhere near the road, and show it to travellers and pilgrims as the tree of Zaccheus, and have even named it after him Zaccoom.*

But the Sycamore fig belongs to the apocryphal histories of the New Testament, as well as to the real Scripture.

There was, not long since, and perhaps there still may be, the ruin of a venerable Sycamore tree at Matarieh in Egypt. It is close by a fine spring of water, the last that travellers meet with, who cross the Desert in going from Alexandria into Syria. Near it are a heap of rubbish and a few stones, which mark the site of a very ancient Christian church, built to commemorate the flight of Joseph and Mary with the

* See p. 330. under ELÆAGNUS.

young child into Egypt. It is said that, having reached that spot, Mary sat down to refresh herself at the foot of the tree by the spring, when suddenly the emissaries of Herod, who were in search of the small party, appeared in the neighbourhood. Wearied and worn out, they could only pray to be saved; when suddenly the tree opened, received them into its body, and fed them with its fruits until the persecution was over.

This tree, which was prodigiously large, was partly destroyed in a storm in the year 1656, before which time the poor monks of the church used to show what they called the very cleft that had received and saved the holy fugitives.* But their occupation is gone; and, like the balsam said to have sprung up in the same place from the sweat of the divine infant, the Sycamore has perished, and "the place thereof knoweth it no more."

* First apocryphal Gospel of the Infancy, viii. 9., and also Celsius.

TARE.

Ervum tetraspermum,— Smooth Tare.
Ervum hirsutum,— Rough Tare.

Linnæan class and order, DIADELPHIA DECANDRIA.
Natural order, LEGUMINOSÆ.

TARE.

St. Matthew, xiii. 25. 27. 29, 30.

These are equally hurtful in corn fields. In wet seasons the Hairy Tare has been known to overgrow and altogether destroy the wheat crop, and the Smooth Tare is not much less mischievous.

The beautiful parable of the sower who sowed good seed, but whose field was spoiled by the introduction of evil seed, contains a description of the manner of gathering in the harvest practised in some parts of Syria and Palestine even to the present day. When the corn is ripe the reapers pull it up by hand, and with it the weeds that have grown up along with it, and then separate them. Sometimes the separation does not take place till after the grain is threshed and winnowed.

Dr. Russel speaks with delight of the beauty of the wheat fields about Aleppo, where the greatest variety of variously coloured flowers grow up along with the ear.

Our farmers would think this but a sorry compli-

ment to their fields, whence they would rightly banish, if possible, every blade but what belongs to the harvest.

All cattle are fond of Tares, hence they are among the artificial green crops cultivated to a considerable extent for fodder.

DARNEL TARE.

There are some weighty authorities for reading darnel instead of Tares in this passage; darnel, or Lollium temulentum, being not only mischievous in choking up the crops, but having the character of being positively poisonous, so that many who have

eaten of bread in which the darnel is mixed with the wheat have died in consequence. This, however, is doubtful, and it is certain that a considerable mixture of the remains of darnel was found by Dr. Brown in the bread discovered in the ancient Egyptian sepulchral chambers; therefore, it is more probable, according to Mr. Brown, that, where the darnel has been found poisonous, the effect is produced by some kind of ergot, as we know the ergot of wheat, rye, and maize to be peculiarly so. Indeed the ergot of maize causes the hair to fall off, and occasions mules who eat much of it to lose their teeth and hoofs.

The Lollium perenne, so far from having the bad qualities of the Lollium temulentum, is our admirable ray grass or rye grass, one of the most beautiful and valuable of our cultivated grasses. There is a beautiful variety of Lollium, a native of Italy, which has been cultivated with success by a gentleman on his farm near Aberdeen. It does not seem to possess any advantage over our rye grass, and is less hardy. Doubtless, this is one of the grasses of Palestine, though I have not found it named by travellers.

THISTLE.

Carduus Arabicus,—Arabian Thistle.

Linnæan class and order, Syngenesia Polygamia Æqualis.
Natural order, Cynaraceæ.

Genesis, iii. 18.	Job, xxxi. 40.
2 Kings, xiv. 9.	Hosea, x. 8.
2 Chron. xxv. 18.	Matthew, vii. 16.

It would be difficult to pronounce which of the various species of Thistle indigenous in Palestine is

the precise Thistle of Scripture. Nay, it is probable that the writers of the different books may allude to more than one. The texts in Genesis and in Job refer probably to the natives of Arabia or the very warmest parts of Palestine, and the others to the Thistles of Judea and the North.

During Hasselquist's short visit to Judea, he observed eight or ten different Thistles on the road from Jerusalem to Rama, and one on Mount Tabor.*

Tournefort found several Thistles in the Levant which do not grow in the West of Europe; and it would seem that there is no land free from this part of the curse which the disobedience of Adam entailed upon the ground.

The passages from the books of Kings and of Chronicles where the Thistle is named relate the apologue employed by Joash, the insolent King of Israel, as a threat to Amaziah, King of Judah, are the same, word for word. "The Thistle that was in Lebanon sent to the cedar that was in Lebanon,

* Among the Thistles of Palestine is the cynara, or artichoke, which grows wild upon Mount Tabor. It was brought to England in the time of Henry VIII., probably by his gardener, who was a French priest of the name of Wolf. He certainly introduced the apricot, and other delicate plums, from Syria and Palestine.

saying, Give thy daughter to my son to wife: and there came by a wild beast that was in Lebanon, and trod down the Thistle." On this occasion the beast did indeed tread down Judah, for the wickedness of the king, who survived the conquest of Joash only to die by the hands of conspirators.

The patriarch of Uz, bearing in mind the original punishment of Adam, says: "If my land cry against me, or that the furrows thereof likewise complain; if I have eaten the fruits thereof without money, or have caused the owners thereof to lose their life; let Thistles grow instead of wheat." Hosea mentions the Thistle as an emblem of desolation; and in St. Matthew we read that, in the sermon on the Mount, our Saviour, when reprehending the wicked, says: "Ye shall know them by their fruits. Do men gather grapes of thorns, or figs of Thistles?"

Yet, though despised, and both the emblem and the partial instrument of the punishment of man's first disobedience, the Thistle, like every other work of God, has its use. In Spain and other hot and dry countries, when the summer's sun has dried up every blade of grass, the numerous herds of cattle which cover the mountain's side in winter would

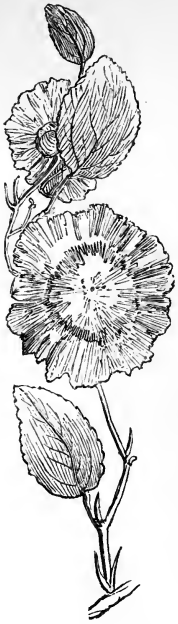
perish, but for the large fields of Giant Thistle which are fenced in, while any grass remains; but, as soon as that is exhausted, the cattle are permitted to enter, and the juicy cups and stalks of the plant not only sustain but fatten them.

The seeds of the Thistle are the favourite food of that pretty family of singing-birds, the finches; one of which, the goldfinch, has its name, both in Latin and French, from the plant it loves to feed upon.*

Thus does the meanest plant join in the great offering of nature's daily incense to the Almighty Maker.

* Carduelis from *carduus*, and Chardonneret from *chardon*, a Thistle.

FLOWERING BRANCH OF PALIURUS NAPECA.



SEED-VESSEL OF PALIURUS NAPECA.

THORN.

Of the many thorny plants whose Hebrew names are rendered by the general word Thorn in our version of the Bible, I select the following, because they appear to be those concerning which there are the most and best authorities.

Paliurus Napeca, — *Christ's Thorn.*
Rhamnus Spina Christi, — *Buckthorn.*
Lycium horridum, — *Box Thorn.*
Solanum spinosum, — *Thorny Nightshade.*
Eglantine Rosa rubiginosa, — *Sweet-Briar.*
Ononis spinosa, — *Rest-Harrow.*
Ruscus aculeatus, — *Butcher's Broom, or Knee Holly.*
Prunus sylvestris, — *Sloe, or Black Thorn.*

Linnæan Classes and Orders.

Paliurus Napeca, Rhamnus Spina Christi, Lycium horridum, Solanum spinosum,	-	Pentandria Monogynia.
Eglantine Rosa rubiginosa,	-	Icosandria Polygynia.
Ononis spinosa,	-	Diadelphia Syngenesia.
Ruscus aculeatus,	-	Dicœcia Diandria.
Prunus sylvestris,	-	Icosandria Monogynia.

Natural Orders.

Paliurus Napeca, Rhamnus Spina Christi, Lycium horridum,	-	Rhamneæ.
Solanum spinosum,	-	Solaneæ.
Eglantine Rosa rubiginosa,	-	Rosaceæ.
Ononis spinosa,	-	Leguminosæ.
Ruscus aculeatus,	-	Smilaceæ.
Prunus sylvestris,*	-	Rosaceæ.

* I did not at first mean to notice a singular mistake that has found its way into some admirable recent publications, illustrative of Scripture, concerning the Thorns named in the Bible. Dr. Clarke, the accomplished traveller, finding the *Cactus Ficus Indicus* common in Syria and Palestine, imagined that it was indigenous there; and accordingly supposes that the hedge of Thorns of Scripture must allude to the cactus. He might have been partly misled by Ursini, who, in his *Arboretum Biblicum* (1699), gives a tolerable figure of the cactus, as the Thorn of the sacred writings. But the truth is, that the cactus never was known until after the discovery of America, when the Spanish, Portuguese, and Dutch traders, having failed in bringing the valuable cochineal plant into their settlements in all parts of the Mediterranean, the East Indies, and the Cape of Good Hope, introduced the thorny *Cactus Ficus Indicus*, in the vain hope that the cochineal insect would feed upon it. Finding a congenial climate, the cactus soon took possession of the soil, and now passes for indigenous.

THORN.

Genesis, iii. 18.
Exodus, xxii. 6.
Numbers, xxxiii. 55.
Joshua, xxiii. 13.
Judges, ii. 3.; viii. 7.
2 Sam. xxiii. 6.
2 Chron. xxxiii. 11.
Job, v. 5.; xli. 2.
Psalm lviii. 9.; cxviii. 12.
Proverbs, xv. 19.; xxii. 5.; xxiv. 31.; xxvi. 9.
Eccles. vii. 6.
Song of Solomon, ii. 2.
Isaiah, v. 6.; vii. 19. 25.; ix. 18.
Isaiah, x. 17.; xxvii. 4.; xxxiii. 12.; xxxiv. 13.; lv. 13.
Jeremiah, iv. 3.; xii. 13.
Ezekiel, ii. 6.; xxviii. 24.
Hosea, x. 8.; xi. 6.
Micah, vii. 4.
Nahum, i. 10.
Ecclus. xxviii. 24.
Baruch, vi. 71.
Matthew, vii. 16.; xiii. 7.; xxvii. 29.
Mark, xv. 17.
Luke, viii. 7.
John, xix. 2. 5.
2 Corinthians, xii. 7.
Hebrews, vi. 8.

NOTWITHSTANDING the numerous texts set down above, the list of passages in which some thorny or prickly plant is either mentioned or alluded to might be much lengthened, as I shall have occasion to observe presently.

According to the Rabbins, there are twenty-two different Hebrew words signifying thorns or prickles in the Bible. Celsius has given dissertations upon sixteen; only one of which, *Kotz*, appears to have the meaning of any thorny plant in general, whether large or small, woody or herbaceous.

1. The Paliurus Napeca, in Hebrew *Shamir*, is believed by most modern authors to be the real Thorn of which the painful crown of our Lord was platted; it is singularly elegant, whether in flower or in fruit, and I cannot do better than copy Hasselquist's account of it. "Nabca Paliurus Athenai of Alpinus. Nabca of the Arabians. In all probability, this is the tree which afforded the crown of thorns, put upon the head of Christ. It grows very common in the East. This plant is very fit for the purpose, for it has many small and sharp spines which are well adapted to give pain: the crown might be easily made of these soft, round, and pliant branches; and what in my opinion seems to be the greater proof is, that the leaves very much resemble those of ivy, as they are of a very deep glossy green. Perhaps the enemies of Christ would have a plant somewhat resembling that with which emperors and generals were crowned, that there might be a calumny even in the punishment."

2. Next after the pretensions of the paliurus to the honour of forming the crown of thorns stand those of the Buckthorn, or Rhamnus Spina Christi. The monks of Jerusalem show, or lately did show, an aged Buckthorn shrub near the holy city, from which they

say the crown was originally cut in such a manner, that, in wearing it, the thorns showed themselves so as to present something like the appearance of the radiate crown with which the kings of the East used to adorn themselves.

3. A third sharp Thorn, native to Palestine, is sometimes considered as the material of the crown of thorns. This is the Lycium horridum, or Box Thorn, whose prickles are of the most stinging sharpness, though the plant itself has a graceful appearance.

BOX THORN, OR LYCIUM HORRIDUM.

4. The Solanum spinosum, or Mad-Apple, in

Hebrew *Chedek*, is the Thorn of Proverbs, xv. 19. "The way of the slothful man is as a hedge of Thorns." It is, also, this Solanum which is the Thorn of the prophet Micah.

5. Sweet-Briar. I have anticipated some of the remarks I might have made on this sweet Thorn, in what I have written concerning the briar, and the use made of it as a scourge of the sharpest nature.

6. When Hasselquist travelled, he found the uncultivated ground in Egypt and Palestine every where encumbered with the beautiful but troublesome Rest-Harrow, or Ononis spinosa; and, from this and some other circumstances, he was inclined to think it the Thorn of the original curse. "Thorns also and thistles shall it [the earth] bring forth unto thee." Most late writers have adopted this notion of the Swedish traveller. Where the Rest-Harrow appears, the spade, plough, and harrow have done their work; and it is not without excessive toil that the ground is reclaimed. Our vernacular name is sufficiently expressive. With us it adorns heaths and hedges, and grows in tufts on the headland of the cornfield. There are several varieties, and all of them pretty.

REST HARROW, OR ONONIS.

7. Butcher's Broom, Ruscus aculeatus, often called Knee Holly or Skewer-wood, is, according to the Rabbins, the real translation of *Atad.** This word first occurs in the book of Genesis, where it is given as a proper name in our version. In the history of the burial of Jacob and the bringing up of his body out of Egypt, our text says: "And they came to the threshing-floor of Atad, which is beyond Jordan, and

* Our version gives *Atad* as a proper name, Genesis, l. 10. In Judges, ix. 14, 15., it is rendered bramble; in Psalm lviii. 9., thorns.

BUTCHER'S BROOM.

they mourned with a very sore lamentation." And when the people of Canaan saw it, "they said, This is a grievous mourning to the Egyptians."

The Arabs have a tradition, that, on that occasion, not only the sons of Esau came to mourn for their father's brother along with his own children, but that the descendants of Ishmael, and those of the sons of Ketura, met, and joined in the solemn rites, planting boughs round the field of the Thorns, and hanging crowns of leaves and flowers upon the Thorns themselves.

This threshing-floor was probably one of those prepared for the common use of a district, to which

each man brought his sheaves and the cattle that were to tread the corn. I have seen such in Italy; and, as the threshing-floor is generally the scene of the harvest-home supper, some little care is commonly taken to shelter it under a bank, or to plant the edge of one side at least, so as to afford a partial skreen from the wind.* And such, most probably, was the threshing-floor of the Knee Holly; near to shelter, and the floor itself offering a wide space for the mourning ceremonies.

This beautiful shrub grows in many parts of England. In Devonshire it forms, together with the true Holly, the undergrowth of the charming woods in the north of the county. Owing to the peculiar growth of the Ruscus, the wood never splinters, nor does it become rough when rubbed in either direction; hence its chief value: for, I believe, all the skewers used for butcher's meat in Britain, and in

* In the *Works and Days* the husbandman is thus instructed:

"Smooth be the level floor or breezy ground,
Where winnowing gales may sweep in eddies round."
Elton's Hesiod, W. and D. l. 833.

This does not contradict the description in the text. One portion was sheltered for the convenience of the labourers and cattle, the rest open to the summer winds.

some other countries, are made of it; hence its name of skewer-wood.

I must not forget a quality lately discovered, peculiar to the Butcher's Broom; namely, that of being, of all kinds of wood, the best conductor of lightning. The result of experiments on different kinds of wood, deciding in favour of the Ruscus aculeatus, were read at one of the great national scientific meetings lately, leaving apparently no doubt of the fact.

SLOE.

8. *Choach*, Prunus sylvestris, Sloe, or Black Thorn, one of the commonest wild shrubs of Jewry, is translated thickets in the first book of Samuel. In the second books of Kings and of Chronicles it is rendered thistles. In one place of Job we find thistles, in another covert, for the same word; but in all the other texts, and they are not few, *Choach* is translated Thorns, and should be Black Thorn.

These are the principal plants which I have been able to choose with any certainty of the truth of the interpretation, though, doubtless, a better scholar or a better botanist might add to their number. As to the word *Kotz*, which, as I have already said, is applied to all kinds of Thorns indiscriminately, it is very frequently used figuratively to denote refractory persons; and it appears, from the various names of two or three other Thorns so applied, to have been almost a proverbial application of the word among the Jews, reminding us of the phrase, in the history of the conversion of St. Paul, "It is hard for thee to kick against the pricks," i. e. Thorns.

Were it allowable to indulge in fanciful interpretations, much might be said about the Thorns of Scripture. But it is enough for solemn consideration, that the Thorn formed part of the original curse wherewith the earth was cursed for the sake of Adam's disobedience; and that he who redeemed us from the consequences of Adam's sin wore on his brow a crown of Thorns, when he bowed his head and pronounced that the great work of salvation was FINISHED.

TIEL.

Tilia Europæa,— Tiel Tree; called also Tiln Tree, and Lime or Linden Tree.

Linnæan class and order, POLYANDRIA MONOGYNIA.
Natural order, TILIACEÆ.

TIEL.

Isaiah, vi. 13.

The Tiel tree is named but once in Scripture; but it is by that diligent observer of nature, the prophet Isaiah.

In shadowing forth the final restoration of the remnant of the people of God, he uses the following beautiful figure. "As a Tiel tree, and as an oak, whose substance is in them, though they cast their leaves, so the holy seed shall be the substance thereof," i. e. of the renewed nation of the Lord.

I have before observed that the greater number of trees, shrubs, and herbs spoken of by Isaiah are such as flourish in the northern part of the ancient kingdom of Israel.

The Lime is among the most beautiful of these. It grows in the forests of Lebanon, and extends to Bashan along with the oak. It is found on Caucasus and all the hill country, to the Himalaya Mountains, and to China.

The great beauty and longevity of the Tiel, or

Linden, have procured for it the honour of sharing with the oak in something like religious honours. In many places it was under the great Linden, instead of the oak, that the councils of the tribes of half-civilised men took place: there were held their markets and their feasts, and many a legend and ancient story tells of the trystings under the Linden, for council or for war. Even now, in some old undisturbed communities, the traveller in Germany will find the Linden of the village green the resort of the old for gossip, and of the young for sport.

Every part of the Linden is valuable to man. An infusion of the flowers, separated from the bracts, is considered to be a sovereign remedy for headache, in Switzerland and Germany. But it is as pasture for bees that the Tiel tree is most to be desired; and, in a country such as Jewry, one of whose temporal blessings it was to be a land of milk and of honey, the Tiel must have been a most welcome indweller. One of the poets of the Hebrews sings that, though the bee "is little among such as fly, yet is her fruit the chief of sweet things."

The bee-hives of Palestine were curious things, imitated indeed from nature. The modern shape

(and no doubt the ancient form was the same) is a hollow earthen tube from two to three feet long, and six or eight inches in diameter, entirely closed at one end, and nearly so at the other. Eight or ten of these tubes are laid pyramidically over each other, and thatched; so that the piles reminded Hasselquist of Swedish pig-sties. These pyramids are found sometimes near an Arab's hut, oftener under a tree; and when, as is the case with the Tiel tree, the blossom affords pasture for the bees, the honey, that great luxury of the East, may be gathered frequently, without destroying the insects, during the flowery season.

At some of the sugar farms in South America, I was surprised to see clusters of hollow trunks of trees generally placed under shelter of the verandas about the house. On enquiry I found they were natural bee-hives, brought in from the forests. As soon as a bee tree in a convenient situation is found, if the tree is of moderate size, the trunk is sawed off above and below the nest, which is then brought home and fresh swarms raised, as we raise them from our straw hives. And such hives in hollow trees appear most probably to have furnished the model for the Jewish, Arab, and Syrian earthen tubes.

But to return to the Tiel tree. The timber is remarkable for softness, lightness, toughness, and durability; so that the turner and the carver are equally its debtors.* One species of Tiliaceous tree is called shoe wood in Brazil, because the soles of the clogs worn universally by the Portuguese in the rainy season are made of it.† Another of the same family furnishes the light timber of which the massoolla or surf boats at Madrâs are built.‡

But perhaps, after all, the bark is the most important part of the Linden. From it cordage, sacking, and other things of the kind are manufactured; and it is from the soft inner part that, from time immemorial, the warm pliable garden mat has been woven. We formerly imported these mats from Holland, whence they were called Dutch or Bass mats; but now they have the proper name of Russian mats, because, by a direct commerce, we have them from the country where they are made. The Linden flourishes in all the provinces, both European and Asiatic, of that huge empire; and these mats often

* Most of the fine carvings of Gibbon are executed in lime-tree wood.

† Corchorus capsularis. ‡ Berrya ammonilla.

serve for clothing and bedding, as they formerly did for sails, even to vessels of considerable size.*

The ravelled strips of bark from the garden mat are much used for tying up delicate or trailing plants, and for knotting together bunches of cut flowers. The ancients appear to have done the same; and, moreover, from some fancied virtue possessed by the bark itself, it was used to tie up the flowers for coronals at feasts, in order that its refreshing qualities might prevent headach. The Roman poet says,

> " I detest
> The grandeur of a Persian feast;
> Nor for me the Linden rind
> Shall the flow'ry chaplet bind."†

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* It is curious that some of the ancient Italian painters represent Mary Magdalene clothed from the waist downwards in a bass mat. St. Rock is also sometimes wrapped in one; and the vessels in which saints and martyrs, whose adventures lead them to cross the sea, are often in old pictures, rigged with sails of bass mat.

† Horace, i. ode 38.

TURPENTINE TREE.

Pistacia Terebinthus,— Turpentine or Terebinth Tree.

Linnæan class and order, Dicœcia Pentandria.
Natural order, Terebintaceæ.

TURPENTINE TREE.

Eccles. xxiv. 16.

This is the only text in our version of the Scriptures in which this beautiful tree is mentioned directly. Here it is numbered up among the choicest of trees and shrubs: the palm, the cedar, the cypress, the vine, the olive, the plane, the cinnamon, and the rose. Its comeliness alone might have obtained this distinction for it; but the precious liquid flowing from it, which was only inferior in value to balsam, rendered it still more deserving the place it holds in the passage where the son of Sirach speaks of it.

In my account of the oak, I have already mentioned that in very numerous passages in which the English translators have read oak, the word should be Terebinth, as well as where the general expressions thick tree, shady tree, are used.*

There are, besides these passages, others where *Elah Elath*, or Terebinth, is used as a proper name.

* It would be useless to repeat any part of the explanation of the mistakes on this subject, and of their causes. See p. 316. (note).

Such as the port of Elath on the Red Sea, so named on account of the Terebinth trees that grew there. And the vale of Elah, where David slew Goliath, was the vale of Terebinths lately enough to have been noticed as such by some modern travellers, though it is now but a stony hollow, through which a small rivulet makes its way among the rocks; the brook, no doubt, from whose bed David chose the smooth stones for his sling.

Among the various observations of Celsius on the words oak and Terebinth, he says that the bodies of Saul and his sons were buried under a Terebinth tree, and not, according to some traditions, under the oak named Allon Bachuch; and he takes occasion to mention the Terebinth of Saul and the oak of Deborah as proofs of a very general and ancient practice of interment under trees, instancing the burial-place of the great Scandinavian hero Angantyr, as a proof of the universality of the custom. The Hervorar Saga, where the fact is recorded, relates that Angantyr and his numerous brethren met their foe Hialmar on the island of Samsoe; and that, after a desperate fight, Angantyr, having lost all his kin, slew Hialmar, whose body was conveyed to Upsal for interment;

but Angantyr and his brethren were buried, each with his sword at his head, under the trees on Samsoe.* Now, soon after Angantyr's death, his only child the heroine Hervora was born; and when she arrived at woman's estate, she went to Samsoe to procure the sword of her father from his grave. Part of her chant as she seeks it runs thus:—

> "Herward and Hiorward,
> Hrani and Angantyr,
> I call you up from under
> The tree root."†

And, in truth, nothing appears to have been more common in the ancient world than the planting of trees—those emblems of humanity, which die but to renew their being—on the graves of those who were once famous or beloved.

I have seen in India, near many Hindoo cottage doors, what I took at first for an altar. It was a square pillar, upon which a common jar, containing a shrub, was placed; and I looked upon it, if not

* Ezekiel, xxxii. 27., speaks of the uncircumcised which are gone down to hell with their weapons of war; *and they have laid their swords under their heads.* This coincidence of the Saga with the prophet seems to me remarkable.

† Hervorar Saga, vii. 91.

erected for some religious purpose, as a matter of taste. But I soon learned that, for the most part, it was a custom of affection: the mother had gathered the ashes of her child after the burning, and, placing them at the bottom of the vase, had laid earth over it, and planted therein a shrub, which had become to her as a child growing under her care, being diligently watered, and guarded from blight and from accident.*

I have already mentioned that in Turkey, and Turkish Asia, the burial grounds of the Christians, particularly the Armenians, are planted with Terebinth trees, the cypress being reserved for the Mahommedans. It is in one sense fitter than that graceful tree for the purpose; namely, on account of its extraordinary longevity.

The fruit of the Terebinth is a green nut, and very like that of the real pistacia, but smaller, and of inferior flavour. It is, however, much used in the Levant.

The Terebinth grows freely at present on the road

* The plant I most frequently saw so placed was the sensitive mimosa, called in India, Sami.

between Jerusalem and Rama, and on the rocks about Mount Tabor; also at Jaffa, and probably throughout the greater part of Palestine.

YOUNG GRAPE.

VINE.

Vitis Vinifera,— Grape Vine.

Linnæan class and order, PENTANDRIA MONOGYNIA.
Natural order, VITACEÆ.

VINE.

Texts in the Old Testament.

Genesis, ix. 20, 21.; xiv. 18.; xxvii. 28. 37.; xl. 9, 10, 11.; xlix. 11.
Leviticus, xix. 10.; xxv. 5.
Numbers, vi. 3, 4.; xiii. 20. 23.
Deut. viii. 8.; xxiii. 24.; xxiv. 21, 22, 23.; xxviii. 39.; xxxii. 14. 32.
Judges, viii. 2.; ix. 12, 13. 27.; xiii. 14.; xv. 5.
1 Sam. xxv. 18.
1 Kings, iv. 25.
2 Kings, iv. 39.; xviii. 31.
2 Chron. ii. 10.; xxvi. 10.
Ezra, vii. 22.
Nehemiah, v. 3, 4, 5.; xiii. 5.
Esther, i. 7.; v. 6.; vii. 7, 8.
Job, xv. 33.
Psalm lxxviii. 47.; lxxx. 8.; cv. 33.; cxxviii. 3.
Song of Solomon, ii. 13. 15.; vi. 11.; vii. 7. 12.
Isaiah, v. 2. 5. 7. 10.; vii. 23.; xvi. 8, 9, 10.; xvii. 6.; xviii. 5.
Isaiah, xxiv. 7. 9. 11. 13.; xxvii. 2.; xxxii. 10. 12.; xxxiv. 4.; xxxvi. 16, 17.; xxxvii. 30.; lxi. 5.; lxiii. 2, 3.; lxv. 8.
Jeremiah, ii. 21.; v. 17.; vi. 9.; viii. 13.; xxv. 30.; xxxi. 5. 29.; xlviii. 32.; xlix. 9.
Ezekiel, xv. 2—6.; xvii. 6, 7.; xviii. 2.; xix. 10. 13.
Hosea, ii. 8. 12.; ix. 10.; x. 1.; xiv. 7.
Joel, i. 7. 12.; ii. 22.
Amos, iv. 9.; v. 17.; ix. 13.
Obadiah, 5.
Micah, iv. 4.; vii. 1.
Habakkuk, iii. 17.
Zechariah, iii. 10.
Malachi, iii. 10, 11.
2 Esdras, v. 23.; xvi. 26. 30. 43.
Judith, xii. 13.; xiii. 2.
Wisdom, ii. 7.
Ecclus. xxiv. 17.; xxxix. 26.
1 Maccabees, vi. 34.

Texts in the New Testament.

St. Matthew, vii. 16.; ix. 17.; xx. 1, 2. 4. 11.; xxi. 33. 39.; xxvi. 29.
St. Mark, ii. 22.; xii. 1.
St. Luke, i. 15.; vi. 44.; xx. 9, 10. 13. 16.; xxii. 18.
St. John, ii. 3.; xv. 1. 4, 5.
Acts, ii. 13.
Ephesians, v. 18.
1 Timothy, iii. 3. 8.; v. 23.
Titus, i. 7.
Epistle of St. James, iii. 12.
Revelation, xiv. 19.

NOTWITHSTANDING the long list of texts quoted, the passages in which the Vine and vineyard, with their

various products, are mentioned are by no means all set down.

The Grape Vine is found wild at this day in the neighbourhood of Noah's first vineyard, at the foot of Mount Ararat. Humboldt found it on the shores of the Caspian, in Caramania, and in Armenia. It is also a native of Georgia, and of the northern parts of Persia; but does not extend to India, though several plants of the same family are common among the mountains of the northern parts of that rich country.

Some writers have imagined that Noah had been accustomed to cultivate the Vine before the flood, and that the antediluvian patriarchs were not without wine. But this is a question of mere curiosity.

It is certain that the culture of the Vine, and the art of making wine, spread early all over Syria and Asia Minor, to Persia on the east, and to Greece and its islands on the west; for we find Hesiod and Homer both familiar with them. The latter mentions several kinds of wine, such as the Samnian*, and the sweet wine made from the grapes of Alcinous's

* Iliad, xi.

gardens.* He also delineates a vintage scene as one of the compartments of the shield of Achilles; and Hesiod introduces another in his description of the shield of Hercules.†

* Odyssey, vii.

† I cannot resist copying here the rival description of the vintage by these venerable poets, giving the precedence to that of Homer, in Cowper's version.

"There also, laden with its fruit, he form'd
A vineyard all of gold; purple he made
The clusters, and the Vines supported stood
By poles of silver, set in even rows.
The trench he colour'd sable, and around
Fenced it with tin. One only path it show'd,
By which the gatherers, when they stripp'd the Vine,
Pass'd and repass'd. There youths and maidens blithe
In frails of wicker bore the luscious fruit;
While in the midst a boy on his shrill harp
Harmonious play'd, and ever as he struck
The chord sang to it with a slender voice.
They smote the ground together, and with song
And sprightly reed came dancing on behind."

I do not know which to prefer, the foregoing very beautiful description, or the following, in which one or two touches are added to perfect the picture: —

"And some again hard by were seen
Holding the Vine-sickle, who clusters cut
From the ripe Vine, which from the vintagers
Others in frails received, or bore away
In baskets thus up-piled the cluster'd grapes,
Or black, or pearly white, cut from deep ranks
Of spreading vines, whose tendrils curling twined
In silver, heavy foliaged: near them rose
The ranks of Vines, by Vulcan's envious craft

But the cultivated Vines of Palestine have always been among the finest of the world, though now, under the Mahommedan law, "the shouting for the vintage" of Judea has ceased. Yet so lately as when the English Turkey Company was chartered, or rather before the charter was actually granted, and while the trade was carried on by merchants recommended by Queen Elizabeth individually to the Sultan, great quantities of Muscadel wines from Judea were shipped from the ports of Palestine, and among the most costly was the fine wine of Ascalon.* From these places, however, the wine-press has long been dismissed; and the direct trade in the fruit of the Syrian Vines is carried on by the French, who bring into Europe immense quantities of raisins from the Levant.†

The Jews about Jerusalem make some wine for

Figured in gold. The Vines' leaf-shaking curl'd
Round silver props. They therefore on their way
Pass'd jocund to one minstrel's flageolet,
Burthen'd with grapes that blacken'd in the sun.
Some also trod the wine-press, and some quaff'd
The foaming must."

* See Hakluyt's Voyages.

† The net product of the duty paid on raisins imported into England, in 1841, amounted to 138,174*l.*

their own use, and for the consumption of their foreign brethren, who dread the Spanish and Portuguese wines, as being often put into vessels made of the skins of unclean animals.

The Vine was not a native of Egypt; nor does the climate favour it. In very ancient times, indeed, it had been introduced there; but its produce was reserved for the rich and powerful, while the people used nothing but their barley drink, or beer.

Some wine, indeed, has been made in Lower Egypt in different ages; but it was never celebrated either for quality or quantity. From the fortieth chapter of Genesis, where the dream of Pharaoh's chief butler is related, it would appear that the juice of the grape fresh-pressed was drunk by the king, and possibly the Egyptian grape-juice at that time was used in the state of must. But though the Pharaohs drank of the "blood of the grape" in this imperfect state, the Ptolemies revelled in the maturer wines of Palestine, Cyprus, and Greece; and one of them, as Josephus tells us, among some magnificent gifts sent to the Temple of Jerusalem, renewed the Golden Vine, the symbol of the Jewish nation, of which the treasury had been robbed.

This Golden Vine was afterwards carried to Rome, where, along with the golden candlestick and other rich ornaments of the Temple, it made part of the show in Vespasian's and Titus's triumph for the taking of Jerusalem.

Tacitus mentions this Vine as one proof that the Jews worshipped Bacchus at the feast of the Tabernacles, which took place about the time of the celebration of the orgies. The truth is, that when the Jewish princes began, in conformity with the customs of other nations, to use coined money instead of lumps of metal of certain weight, the Vine was their common device. Some of their pieces have on them a single Vine leaf; others a bunch of grapes, or a Vine branch with leaves, fruit, and tendrils. Yet these, like the Golden Vine, were only symbolical of the nation, though they were, like it, taken for the signs of idolatry.

The book of Genesis informs us that the culture of the Vine, and the art of making wine, were very ancient in the land of Canaan. It relates that, when Abraham and his followers were returning with their captives from the open country, where they had overcome Chedorlaomer and the kings of the plain,

Melchisedeck, King of Salem, brought forth bread and wine to refresh them.*

In the scriptural summing up of the riches and temporal blessings of the land promised to the descendants of Abraham, the Vine is always prominent among the number, and, together with corn and oil, is peculiarly noticed in the laws of Moses. Thus:

"When thou cuttest down thine harvest in thy field, and hast forgot a sheaf in thy field, thou shalt not go again to fetch it: it shall be for the stranger, for the fatherless, and for the widow.

"When thou beatest thine olive tree, thou shalt not go over the boughs again: it shall be for the stranger, for the fatherless, and for the widow.

"When thou gatherest the grapes of thy vineyard, thou shalt not glean it afterwards: it shall be for the stranger, for the fatherless, and for the widow."

Thus of the chief and most necessary things a portion was secured to him who had no inheritance in

* Genesis, xiv. 18. "And Melchisedeck, king of Salem, brought forth bread and wine: and he was the priest of the most high God." A type, we are taught to believe, of the bread and wine of the new covenant; given to us, as to Abraham, with whom the old covenant began, by the priest of the most high God. (Hebrews, v. 6.)

the land, and to those whom weakness or tender age rendered incapable of cultivating, perhaps even of claiming, their own fields. So were God and man cheered and honoured by the fruits of the earth.

The fruitful Vine is the favourite emblem by which the inspired writers love to figure the Hebrew nation. When obedient, the Vine flourisheth, and extendeth her branches to the farthermost parts of the earth; but when rebellious, God hideth his face,—the Vine is neglected, the wild beasts break down the fences, trample the vineyard, and devour its clusters, till all is waste. Again, on repentance, the Lord of mercy turneth and visiteth his Vine*; and the vineyard is restored, the wine-press is full, and every man may rejoice under his Vine, and under his fig tree.

The first time the Vine is introduced in symbol or parable is in the beautiful fable of Jotham, saying, "Should I leave my wine, which cheereth God and man, and go to be promoted over the trees?"†

But it is in the poetry of David and the prophets that the Vine appears as a most glorious image. "The Vine that was brought out of Egypt filled the

* Psalm lxxx. † Judges, ix. 13.

land. The hills were covered with the shadow of it, and the boughs thereof were like the goodly cedars. She sent out her boughs unto the sea, and her branches unto the river. Why hast thou *then* broken down her hedges, so that they which pass by do pluck her? The boar out of the wood doth waste it, and the wild beast of the field doth devour it. Return, we beseech thee, O God of hosts: look down from heaven, and visit this vine!"

What can be more cheering, more exultingly beautiful, than the first part of this fine passage from the psalmist? What more touching than the last?

In one of the early chapters of Isaiah he almost repeats the words of his royal predecessor, in his melancholy denouncement of the people of Israel.* But far more sad is the prophecy against Moab.† "I will wail with the wailing of Jazer the Vine of Sibmah; I will water thee with my tears, oh Heshbon and Elealeh: for the shouting for thy summer fruits, and for thy harvest is fallen. And gladness is taken away, and joy out of the plentiful field; and in the vineyards there shall be no singing, neither shall

* Isaiah, v. † xvi. 8, 9, 10.

there be shouting: the treaders shall tread out no wine in their presses; I have made their vintage shouting to cease."

Jeremiah almost repeats this lament. "O Vine of Sibmah, I will weep for thee with the weeping of Jazer: thy plants are gone over the sea: they reach even to the sea of Jazer. The spŏiler is come upon thy summer fruits, and upon thy vintage."

In the words of the vehement Ezekiel, how worthless would the Vine branch be in itself for any kind of work, or to fill the meanest office, much less to bear leaves and fruit, without the protection and nurture of the Vine-dresser; and how, if he cast it into the fire, shall it be for any good? Even so Israel in himself was a small nation, and only as his chosen people could the Vine of Jacob flourish, and his branches overspread the land.*

Yet, though the Vine flourish, and the grape appear, if the root turn to another lord, "it shall wither in all the leaves of her spring."†

Reproving the common saying in Israel, "The fathers have eaten sour grapes, and the children's

* The whole of the fifteenth chapter of Ezekiel.

† Ezekiel, xvii. 6—10.

teeth are set on edge," with what majesty does the prophet take occasion to vindicate the justice of God! "Behold as I live, saith the Lord! . . . . . Behold all souls are mine. As the soul of the father, so also the soul of the son is mine. The soul that sinneth, it shall die. But if a man be just, and doeth that which is lawful and right, he shall live." And so through the whole chapter, proclaiming justice, and preferring mercy.

The minor prophets are not behind their great examples in the beauty and exquisite propriety of the imagery they have drawn from the Vine. But I have already quoted examples enough. In reviewing the various texts wherein the vineyard or its produce is spoken of in Scripture, especially the Old Testament, the curious antiquary may learn many particulars of the manners and customs of the ancient nations of the East; and there are also curious facts to prove the unchanging nature of traditional custom, but these do not concern my present purpose.

In the New Testament the Vine shares with the lily and the wheat field, the fig and the olive, the honour of illustrating the parables of our Divine Teacher.

In the sermon on the Mount, he asks, in illustra-

tion of the sentence concerning bad men, "by their works shall ye know them,"—"Do men gather grapes of thorns?" And, in speaking the two parables,—the first of the labourers, who, though entering the vineyard at different hours of the day, received each his just reward; and the second of the rebellious labourers, who first turned out their lord's appointed messengers, and finally abused and slew his son,—how beautifully has the Preacher chosen scenes familiar to the minds and senses of his hearers!

But beyond all the fruits of the earth is the fruit of the Vine honoured and hallowed: Jesus himself hath consecrated it.

The beginning of miracles which Jesus did, says the disciple whom he loved, was to turn water into wine, and to bestow it upon new-married persons; sanctifying thus the first natural institution that holds human society together, and that pre-eminently distinguishes man from the rest of the animated creation.*

* "Hail, wedded love! mysterious law, true source
Of human offspring! . . .
. . . By thee,
Founded in reason, loyal, just, and pure,
Relations dear, and all the charities
Of father, son, and brother first were known."

The last blessing bestowed on man, before his final suffering, and after he had declared himself the true Vine, was, in his character of a priest for ever, after the order of Melchizedeck, to deliver through his apostles unto all mankind bread and wine, saying, as "he took the cup, and gave thanks, and gave it to them, Drink ye ALL of it; for this is my blood of the New Testament which is shed for the remission of sins."

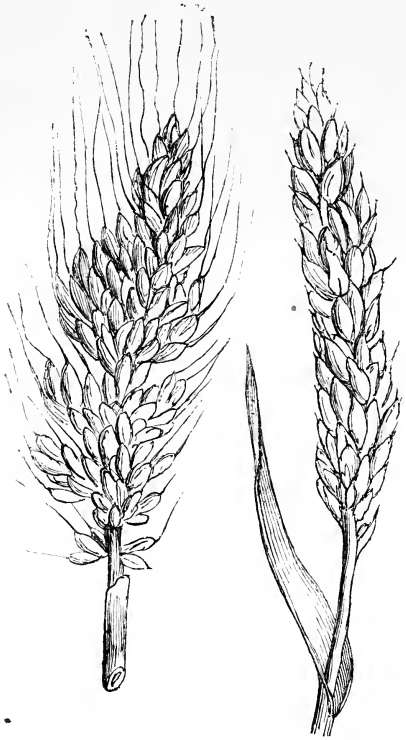
WILD VINE.*

Vitis Labrusca,— Wild Vine, or Fox Grape.

Isaiah, v. 2. 4.

* The Wild Vine, the sour grape mentioned occasionally by the prophets in Scripture, may be merely the Grape Vine left to grow wild and untrimmed. But it is more probably the Labrusca, which grows plentifully in Palestine, and in all the warmer parts of the temperate zone in Asia. Its berries are smaller than those of the Wine Grape, and are never equal to the fruit of the real Vine in flavour or sweetness. They were chiefly used for making verjuice.

The Fox Grape, also Vitis Labrusca, is found in the virgin forests of North America, along with the Vitis Cordifolia or Winter Grape, and Vitis Æstivalis or Summer Grape. These are doubtless the Grape Vines found by the old Northmen, whose adventurous voyages from Scandinavia and Iceland had carried them to several parts of the coast of America centuries before the bold speculations of Columbus had led him across the Atlantic.



EGYPTIAN WHEAT. COMMON WHEAT.

WHEAT.

Triticum Æstivum et Triticum Hybernum,— Summer and Winter Wheat.

Linnæan class and order, TRIANDRIA DIGYNIA.
Natural order, GRAMINEÆ.

WHEAT.

Genesis, xxx. 14.
Exodus, ix. 32.; xxix. 2.; xxxiv. 22.
Numbers, xviii. 12.
Deut. viii. 8.; xxxii. 14.
Judges, vi. 11. 19.; xv. 1.
Ruth, ii. 23.
1 Sam. vi. 13.; xii. 17.
2 Sam. iv. 6.
1 Kings, v. 11.
1 Chron. xxi. 23.
2 Chron. ii. 10. 15.; xxvii. 5.
Ezra, vi. 9.; vii. 22.
Job, xxxi. 40.
Proverbs, xxvii. 22.
Song of Solomon, vii. 2.
Isaiah, xxviii. 25.
Jerem. xxiii. 28.; xxxi. 12.; xli. 8.
Ezekiel, iv. 9.; xxvii. 17.; xlv. 13.
Joel, i. 11.; ii. 24.
Amos, v. 12.; viii. 5, 6.
Judith, ii. 27.; iii. 3.
Eccles. xxxix. 2. 6.
St. Matthew, iii. 12. 17.; xiii. 25. 29, 30.
St. Luke, iii. 17.; xvi. 7.
St. John, xii. 24.
Acts, xxvii. 38.
1 Cor. xv. 37.
Revelation, vii. 6.; xviii. 13.

Besides those passages in Scripture where the specific word Wheat* is used, Celsius and others would fain consider all those where corn† is named as implying Wheat, and also those in which parched or dried corn‡ is found. The long and learned dissertation in the *Hierobotanicon* on the general word

* Called *Chittah*. † Called *Bad*. ‡ Called *Kali*.

Corn* goes to prove from ancient writers, sacred and profane, that it always meant bread corn, that is, Wheat. But we must remember that the Jews used a great deal of barley bread. We find, for instance, that barley bread was presented to David for his own use, and that of his army; and who can forget the barley loaves of the New Testament? Bread was also made of rye and of spelt or zea; especially in Egypt, as we may infer from Scripture, and as Herodotus positively asserts it. Therefore, perhaps the general name Corn is the best possible translation of the passages in question.

With regard to the parched corn, if the traditional use of any species of grain goes for any thing, there are few modes of eating the fresh ears more common in the East, even now, than roasting or parching it before the fire.†

* Gen. xli. 35. 40.; xlii. 3. 25.; xlv. 23.
Job, xxxix. 7.
Psalm lxvi. 14.; lxxii. 16.
Proverbs, xi. 26.
Jeremiah, xxiii. 28.
Joel, ii. 24.
Amos, viii. 5, 6.
Matthew, iii. 12.; xiii. 25. 29, 30.
Mark, iv. 28.
Luke, iii. 17.; xvi. 7.; xxii. 31.
John, xii. 24.
Acts, vii. 12.; xxvii. 38.
1 Cor. xv. 37.
Revelation, vi. 6.; xviii. 13.

† I remember seeing a poor Hindoo, who, for some reason, was obliged to make a short passage by sea. Cooking in the ship would to him have been pollution: his whole provision was, therefore, a little bag of parched rice.

Wheat would seem to have been native to the western and central parts of Asia, whence it was early spread over the greater part of the old world by the migratory habits of the patriarchs of mankind. It is first mentioned in Scripture in the account of Jacob's sojourn with his father-in-law Laban. The country of Laban, Padan Aram, was the northern portion of Mesopotamia; one of those elevated plains to the southward of Caucasus whence the Tigris and Euphrates take their sources, and where cities were already built*, nations had become stationary, and the plains were covered with cultivated grain. To this day it is in those lands that bread corn is found wild, though the cities are decayed, and only serve as strong places for the fierce tribes who have long spoiled the land.

Whithersoever the first who departed from the original hive of man to form fixed settlements wandered, they doubtless carried bread corn; seating themselves first in the most favourable climates. A few months sufficed the yet virgin earth to produce the crops; and even the tribes who followed a pasto-

* Three of these cities were, Edessa, Harran or Charran, Carrhæ, and Archad or Nisibis. Harran was the birthplace of Abraham.

ral life, and removed from time to time for the convenience of their flocks and herds, rested while they sowed their grain and gathered in their sheaves. And many of the wandering tribes of the deserts, both of Asia and Africa, still continue the practice.

Wherever any traces of the ancient patriarchal government and priesthood were found, there was Wheat cultivated. It was not to the Roman invaders that Britain owed its bread corn: one of Cæsar's first acts on our shores was to rob the Wheat fields of Kent, which had grown under the druid government. Other grains were also cultivated here; and the Gothic tribes, who had made their way from the base of Caucasus to Scandinavia, had not been behind the settlers of the South in spreading the blessing of corn wherever they had raised a Runic stone.

The oldest sacred and profane books describe Egypt as a country abounding in Wheat; and, to some of the Egyptian colonies, certainly Greece, and probably Sicily and Italy, owed their bread corn.*

* In very early times it appears that Wheat was by no means reserved exclusively for the food of man. In the eighth Iliad, Homer tells us that the horses of Hector were fed with Wheat, and the geese of Penelope were fattened upon boiled Wheat. (*Odyssey*, xix. 667. Cowper's translation.)

The Israelites, while wandering in the Desert, were not without Wheat. Though suffering from occasional scarcity, yet when the tabernacle was erected, and the ark of the covenant framed, fine wheaten flour was produced in abundance for the sacred services; the offering of righteous Abel, the first fruits of the earth, being thus continued for a memorial.

How often, when the heart of Israel was ready to faint, did Moses renew the spirit of the people by reminding them of the land of corn, and wine, and oil that they were to inherit! How did the seer's dying eyes rejoice, when on Pisga's topmost ridge he turned from the glories of the city of the palm trees to the nearer scene of the fields of Elealeh, the vineyards of Sibmah, and the Wheat-covered plains of Minnith!*

Instead of single spikes, such as we are familiar with, the fruitful Wheat of Egypt and of Heshbon† appears rather to be a cluster of spikes, numbering many more grains than our best ears, but having no other perceptible difference beyond the length and

* These, with the fruitful Heshbon, lay within a circuit of twenty miles to the north-east of Pisga. For the Wheat of Minnith, see Ezekiel, xxvii. 17. That of Heshbon is to this day the finest perhaps in the world.

† Triticum compositum.

quality of the straw. This, however, seems to depend entirely on climate.

In the magnificent corn fields of Guzerat a horseman may pass along unseen between the furrows, so tall is the Wheat stalk. Throughout both temperate zones Wheat is daily spreading over the earth. The red man of America, the black African, and the dusky native of Australia are already less dependent on the chances of the hunting grounds, and the crude productions of the boughs and roots of the forest. The Wheat field, and the certain civilisation that attends it, are encroaching on the wild prairies and jungles; and where the savage yells of the hunter or the howling of the monsters of the desert were alone heard, the shouting of the treaders of the wine-press and the gatherers-in of the harvest is beginning to make music like the shouting of Sibmah and of Minnith.

Christian piety, which received its faith and doctrines from the sacred lands of Palestine, first conveyed the temporal goods—the corn, and wine, and oil of the promised land—across the Atlantic, to feed the countless numbers of generations to come; and Christian commerce is now spreading them to every land trodden by the foot of man.

Wheat, and the bread made from it, accompanied by salt, were offered before the Lord in acknowledgment of their first of temporal blessings, by express injunctions of the law of Moses. Nor did even the heathen neglect a like expression of gratitude. Whether the religion were founded on the mystic dreams of Bhoods or Bramah, the allegories of Egypt, or the poetry of Greece, corn was indispensable in all sacrifices to the gods, or to the spirits of the ancestors.

A Hindoo of our time lays apart the few first grains of his scanty meal for his gods. The Greeks of Homer offered no bullock without the salted barley. Even in modern times the first sheaf from the Wheat field, the first handful gathered by the reapers, are consecrated to the feeling, if not the formal avowal, of gratitude.

I never saw a prettier country festival than at a mountain village overlooking the Campagna of Rome; when the first sheaf of Wheat reaped in the valley was brought, decorated with flowers and ribands, to the chapel of the protecting saint, and placed before the altar as the poor priest's share of the harvest.

In our Protestant country, the harvest home has been quite a secular feast; but many of its traditionary

observances point to the heathen gratitude of our ancestors as their origin. The first handful reaped was called the maiden; and this was saved, and was carried in triumph with the last wain-load to the barns, while the "shouting for the summer fruits and the harvest" * filled the air with sounds of grateful rejoicing.

I think we may infer from Scripture that barley formed the chief bread of the labourers, mixed, probably, with rye or spelt. But Wheat was in use among the rich, and was furnished to Tyre as a regular article of merchandise, according to Ezekiel.† Solomon sent by treaty to Hiram a certain proportion of Wheat as well as barley, for the sustenance of the woodmen employed in cutting cedar in Lebanon; and many texts show how largely it was cultivated all over Palestine.

An expression in Proverbs informs us that Wheat was sometimes mixed with inferior grain. "Though thou shouldst bray a fool in a mortar among Wheat with a pestle, yet will not his foolishness depart from him;" a comparison taken, no doubt, from the common custom.

* Isaiah, xvi. 8, 9. † xxvii. 17.

We know from Pliny that both the Greeks and Italians of his day mixed many varieties of grain with their Wheat; some with the idea of increasing its wholesomeness, and others for the sake of their flavour. Their bread was usually leavened; only in Gaul and Spain, we are told, it was lighter than in Italy, because it was raised with the scum of the liquor made by the Gauls from grain. In fact, it was raised, like our own, with yeast.

The Wheat usually grown in Palestine was precisely that we see covering our own corn lands for the most part; but it would seem that in the southern part of Jewry, as in Egypt, the Triticum compositum, or many-headed Wheat, was, and is still, cultivated. The fine Polish Wheat is large and productive, but grows on too high a stalk to stand well in our summer storms. In Naples and Apulia the Egyptian Wheat succeeds well; but the best of all is the red spring Wheat of Sicily.*

The leavened bread of the ancients seems to have borne a great resemblance to our household bread; but it must have been much coarser, if we are to take

* Sir Humphrey Davy found that it contained a larger proportion of gluten than the rest.

as evidence that found in the ancient Egyptian tombs, or in the ruins of Pompeii, and the descriptions left us. The unleavened bread, of the East at least, must have been like the soft Arab cakes, eaten hot the moment they are prepared, or in the form of biscuit like that with which the modern Jews celebrate the Passover. Cakes of various kinds, mixed with honey, nuts, almonds, spices, poppy, and other seeds, were also common; and we are told that even lintseed went into the composition of some of them.*

I have already mentioned, in speaking of the vine, the merciful law that forbade the Jewish farmer to go back for a forgotten sheaf, or to collect the scattered ears of corn; but to leave them for the stranger, and the widow, and the fatherless. Perhaps there is not, even in Scripture, a more touching tale than that of Ruth the Moabitess, who followed her mother-in-law back to the land of her fathers, and there reaped the reward of her virtuous affection, while gleaning in the fields of Boaz, in a marriage from which sprang, in direct descent, and in the fulness of time, the Messiah! the Christ! Jesus! who gave up his body to the tor-

* Pliny's Natural History.

mentors for our redemption, and left, for a continual remembrance of that sacrifice, the command to his followers that they eat *bread*, man's daily sustenance and the staff of his earthly life, as a symbol of Christ's own body, thenceforth to be his spiritual food, while they drank of the cup, the token of the blood which was shed for the remission of sins.

WHITE WILLOW.

WILLOW.

Salix alba,— White Willow.
Salix viminalis,— Osier.
Salix Babylonica,— Weeping Willow.
Salix Safsaf?

Linnæan class and order, Dicœcia Diandria.
Natural order, Salicaceæ.

WILLOW.

Leviticus, xxiii. 40. Psalm cxxxvii. 2.
Job, xl. 22. Isaiah, xv. 7.; xliv. 4.
Ezekiel, xvii. 5.

The White Willow is preeminently the Willow of the brook; and its large branches are well adapted for the purpose enjoined in Leviticus, where, along with the boughs of other thick trees, the Israelites are commanded to make of them tabernacles in which they were to celebrate one of their most solemn feasts.

The children of Israel still present Willows annually in their synagoges, bound up with palm and myrtle, and accompanied with a citron. And it is a curious fact, that during the Commonwealth of England, when Cromwell*, like a wise politician, allowed them to settle in London and to have synagogues, the Jews came hither in sufficient numbers to celebrate the feast of Tabernacles in booths, among the Willows on the borders of the Thames. The disturbance

* The old act of banishment passed in the reign of Edward I. was still in force, though it would be easy to show that there were Jews in England under both Tudors and Stuarts.

of their comfort from the innumerable spectators, chiefly London apprentices, called for some protection from the local magistrates. Not that any insult was offered to their persons, but a natural curiosity, excited by so new and extraordinary a spectacle, induced many to press too closely round their camp, and perhaps intrude upon their privacy. This public celebration of the feast of Tabernacles has never been renewed: and, in our time, the London Jews of rank and education content themselves with their own houses; while the Jews who hold more to the letter of the law construct a tabernacle either in a garden or court-yard, or on a house-top, with planks covered with trellis, so as not to shut out the stars, and decorated with boughs of Willows of the brook, and other thick trees, to which are hung citrons, apples, pears, and other dried fruits, gilt over and intermixed with artificial flowers. Those who have no space to erect a tabernacle are generally invited by some hospitable neighbour to eat, at least once during the feast, in an open dwelling.

Of the Willows on the banks of the Jordan, a singular use has been, and still is, made. A divining rod was in ancient times a necessary implement of both

priest and physician, nay, of every head of a house, and these rods were generally of Willow.

It is difficult to say at what period the custom began among the Jews, whether they carried it with them from the land of Canaan, or whether they adopted it in Egypt.* The present customs of those Jews who profess to adhere the most closely to their ancient traditions show the Willow staff to have been a divining wand in truth. At the feast of Tabernacles each person has a bundle of Willow branches in full leaf, one of which he strikes against some part of the house, so as to shake off the leaves; if they all, or nearly all, fall at once, he augurs that his sins are forgiven; if not, he lives in fear of misfortunes, or even death, until another year brings a fresh divining season. Some use the Willows to enquire whether such or such an event as they wish shall come to pass; and some preserve them carefully, and, by the falling off of the leaves, divine concerning the duration of

* The rods of Moses and Aaron, and of the Egyptian soothsayers, were certainly divining rods; and, as traditional customs are apt to outlive even written history, the divining rods wherewith the miners of France and Cornwall detect the existence of metals under ground, and the German adept finds out the water-springs in the barren field, are indisputably descended from the divining rods of Egypt and Arabia.

the lives of those who are dear to them. In the preface to Sale's *Koran*, some curious facts are stated concerning the customs of the Arabs, who, like the Jews, cut Willows with which they divined, and which they kept for a year, drawing various prognostics from the state in which the rods continued. This practice is spoken of in the apocryphal gospels; where we are told that, when the virgins brought up in the Temple were marriageable, the unmarried men of the tribe they belonged to were commanded to bring their Willow rods to the high priest, and lay them on the altar, where a prayer of consecration was said over them, and the rod which appeared freshest after the prayer entitled the owner to the principal virgin. Now when the Virgin Mary was of age, and the rods of the young men of the tribe of Judah had been offered, that of Joseph, the most advanced in years, appeared to have budded and broken into leaf, upon which the priest performed the ceremony of marriage; and Joseph received Mary, while the other men of the tribe broke their rods for spite and envy.*

* Christian painters, down to the time of Raffael, attended to this point of what we may call costume. In his beautiful early picture of the marriage of the Virgin a young man is breaking his staff over his knee.

The Salix viminalis, or Osier, is most probably the Willow of the book of Job, wherewith he says behemoth is compassed about. The Osier, as well as the White Willow, is common on the banks of Jordan; and it must have been of considerable importance, while the offerings of first-fruits were yearly carried to the Temple, because the lawful vessels for such offerings were baskets*, which the people generally wove of peeled Osiers, while the rich and ostentatious conveyed their offerings in baskets of silver.

The beautiful Salix Babylonica, or Weeping Willow, was surely that on which the people of the captivity hanged their harps, as the psalmist sings in the most touching elegy that was ever indited.

As to the Safsaf†, it is mentioned as common in Syria and Palestine, by Bruce and other travellers, particularly Hasselquist, who says that, like our sallow‡, it grows in dry and sandy places, as well as by the water.

Maundrel says that the flat ground on both sides of Jordan, which probably formed the ancient bed of

* Deut. xvi. 2.

† Ezekiel, xvii. 5. The word translated Willow is *Tzafzafa.*

‡ Salix caprea. The modern English Jews prefer the sallow to all other Willows for their ceremonies.

the river, is so covered with thickets of oleander, tamarisk, and Willow, that you do not discover the river itself until close upon it. Pocock and Hasselquist also talk of the Willows of Jordan, and mention that, at the annual pilgrimage made to the banks of the Jordan, the pilgrims cut staffs of them.

Two places on the river are yearly visited, one by the Latin, the other by the Greek, Christians, both caravans being protected by Mahommedan soldiers. The Latin Christians have pitched upon a spot as being that where St. John baptised Christ, where the river is so rapid that those who bathe in it are obliged to hold fast by the Willows that they may not be carried away, while the weaker sort content themselves with standing on the bank, and procuring pitchers of water to be poured over their heads.

The Greeks have chosen a place four or five miles nearer the Dead Sea, where the river is less rapid, and a good deal wider. Both parties are accompanied by numbers of Jews, who gladly avail themselves of the opportunity to visit Jordan in safety; and it is curious that Jews, Christians, and Mahommedans, are alike eager to provide themselves with staffs from the Willows of the holy river.

The Willow, in all countries and in all times, has been most useful to man. Its tough yet pliable nature renders it fit for wattling the hut of the savage. Baskets to carry and contain his food and other possessions were indispensable. The ancient people on the banks of the Tigris and Euphrates framed wicker boats and covered them with skins; such are even now occasionally found at the ferries on those rivers; and such were the first boats employed by our own ancestors, whose coracles, for so these boats were named, are now and then occasionally dug up from the mud at the bottoms of our rivers, and show one of the ingenious uses to which our forefathers applied the Willow.

The bark of the Willow contains a good deal of tannin, and is used in dressing some kinds of leather: the delicate white wood is invaluable to the cabinet-maker, not only in its natural state, but dyed. It takes any artificial colouring; and is much used, where ebony would be too expensive, for inlaying. The charcoal of Willow is said to be the best to employ in making gunpowder; and the whole plant yields a salt called salicine, which is said to be equally efficacious with quinine for the cure of fevers and agues.

But it is not only for its domestic uses that this beautiful tree has been celebrated. The poets in all times and nations have done it honour. It appeared among the coronals of the heathen deities; and with us it garlands the despairing lover. So Shakspeare's Desdemona died singing of it; and so the Willow growing "across the brook" helped on poor Ophelia's fate.

WILLOW FLOWER.

But I will not dwell upon the Willow of the heathen

farther, but refer again to the poetical passages in the book of Job and the prophets, which I have already quoted.

In more than one page of a former part of my little book I have mentioned that, as the palm is not attainable in this country to celebrate the entrance of Christ into Jerusalem, in Romish times the flowering branches of various Willows, especially the sallow, were used for that purpose; and that the Jews, also, present them in their ceremonies. English boys still parade their sallow flowers, either in their hats or hands, on Palm Sunday.

WORMWOOD.

Absinthium Santonicum Judaicum,
Artemisia Judaicum, } *Wormwood of Judæa.*

Linnæan class and order, SYNGENESIA—POLYGAMIA SUPERFLUA.
Natural order, ASTERACEÆ.

WORMWOOD.

Deut. xxix. 18.
Proverbs, v. 3, 4.
Jeremiah, ix. 15.; xxiii. 15.
Lamentations, iii. 15. 19.
Amos, v. 7.
Revelation, viii. 10, 11.

Wormwood of some kind is found wild in all parts of Europe. The Artemisia Judaica, as its name implies, is a native of Palestine, and was found by Hasselquist on Mount Tabor. Some have supposed, erroneously, that the Wormwood of Scripture is our southernwood, a plant more fragrant, but less bitter, therefore less fit for the use to which the sacred writers have put it, namely, the comparison of its bitterness with sin and its consequences.

How solemnly Moses invites the people to assemble and take an oath to keep the law, while he is still with them, "lest there should be among you a root that beareth gall and Wormwood!"*

Solomon warns the young man that the strange woman, whose lips are as the droppings of the honeycomb, will have an end bitter as Wormwood.†

Jeremiah, denouncing the disobedience of the Jews,

* Deut. xxix. 18.

† Proverbs, v. 3, 4.

threatens them with being condemned to eat Wormwood; and in his Lamentations he makes the faithful to say, "He hath filled me with bitterness, he hath made me drunken with Wormwood."

The prophet Amos, in one of his finest chapters, exhorting the wicked to repentance, especially addresses the corrupt judge who turns "judgement to Wormwood." And who has not in mind the sound of the third trumpet in the Apocalypse, when the star whose name was Wormwood fell and mingled with the waters, so that many men died?

Such are the remarkable passages in which the qualities of Wormwood, rather than the plant itself, are named.

Among the ancients, Wormwood was esteemed as a valuable medicine peculiarly efficacious in epilepsy, and it continued in repute till of late years. The modern Italians indeed still continue to distil a pleasant bitter spirit from it, which they consider an excellent stomachic.

With us it is mostly burnt, on account of the quantity of potash it yields, from which the salt of Wormwood is prepared.

THE END.

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CORRIGENDA.

Page iv. line 5. of note, for "Scheutzer's" read "Scheuchzer's."
30. line 2. for "*Gileadensis*" read "*Gileadense*."
61. line 3. for "Monogynia" read "Polygynia."
68. line 3. for "Triandria Monogynia" read "Monœcia Triandria."
line 4. for "Cyperaceæ" read "Typhaceæ."
78. line 6. for "Dipteraceæ" read "Dipterocarpeæ."
87. line 5. for "Diadelphia Decandria" read "Decandria Monogynia."
105. line 3. for "Monandria" read "Enneandria."
108. line 3. for "Polyandria Icosandria" read "Polyadelphia Polyandria."
112. line 4. for "Carophylleæ" read "Caryophylleæ."
123. line 3. for "Monogynia" read "Digynia."
147. line 3. for "Diadelphia" read "Monadelphia."
152. line 3. for "Dodecandria" read Decandria."
192. line 2. for "Avelanus" read "Avellana."
228. line 4. for "Lilacea" read "Liliaceæ."
249. line 3. for "Polygynia" read "Polygamia."
254. line 3. for "Monadelphia Polyandria" read "Polyandria Monogynia."
269. line 4. for "Anacardiæ" read "Terebintaceæ."
287. line 3. for "Tetrandria" read "Tetradynamia."
296. line 3. for "Monadelphia" read "Monogynia."
306. line 4. for "Ranuncula" read "Ranunculaceæ."
344. line 4. for "Lilacea" read "Liliaceæ."
375. line 3. for "Tetrandria" read "Triandria."
402. line 4. for "Salinaceæ" read "Saliceæ."
406. line 2. for "Malus" read "Pyrus."
431. line 4. for "Liliaceæ" read "Irideæ."
467. line 3. for "Polygynia" read "Polygamia."
line 4. for "Urtaceæ" read "Urticeæ."
483. line 1. *bis*, and line 7.
484. line 2. and line 11. } for "Napeca" read "aculeatus."
line 7. for "Syngenesia" read "Decandria."
line 8. for "Diandria" read "Triandria."
line 11—14. connect "Paliurus aculeatus
Rhamnus Spina Christi" as belonging to "Rhamneæ."
"Lycium horridum
Solanum spinosum" as belonging to "Solaneæ."
532. last line, for "Salicacæa" read "Saliceæ."
542. line 3. for "*Judaicum*" read "*Judaica*."
line 4. dele the rule.

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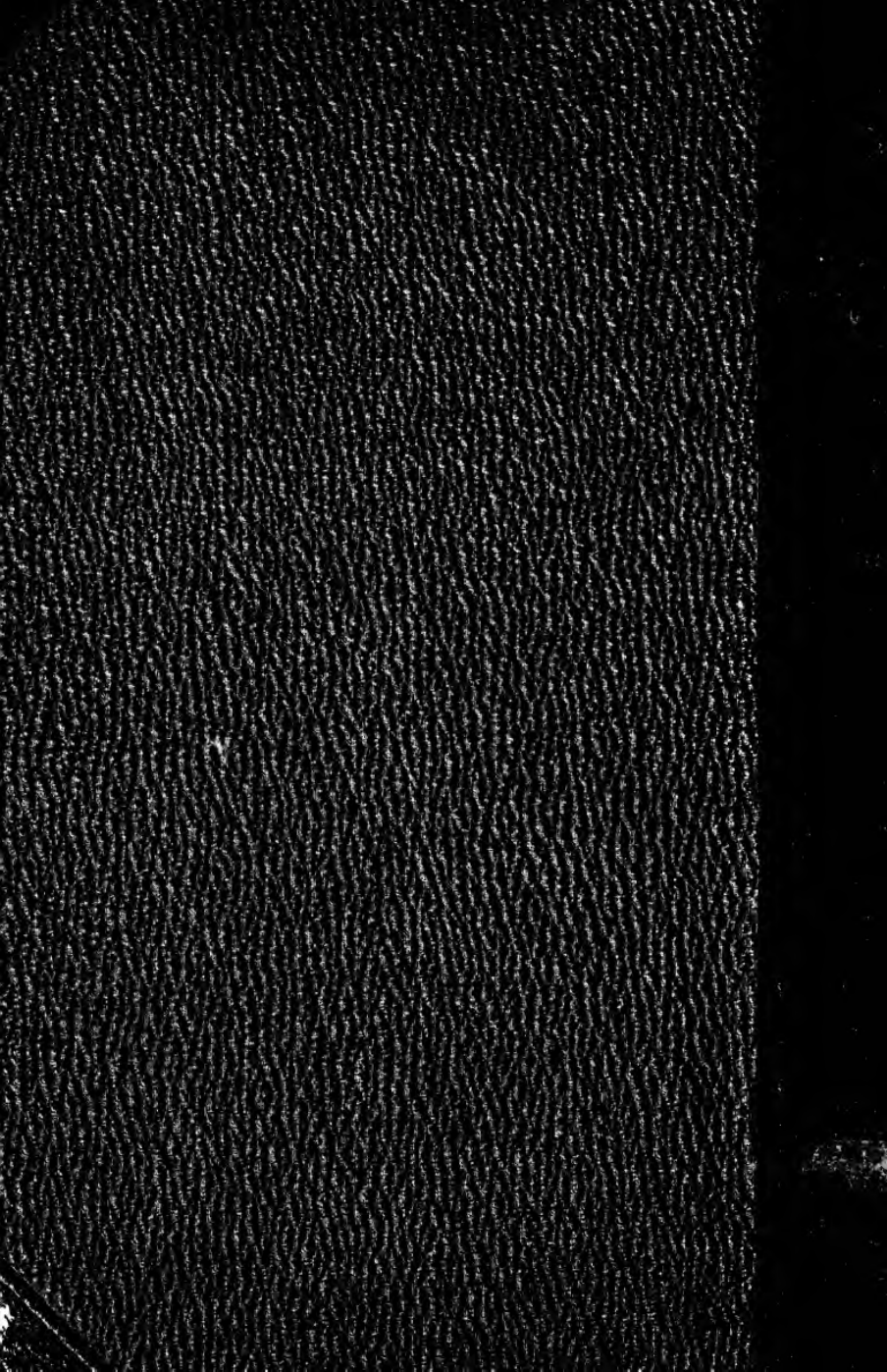
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